## In The Depths of the Sargasso Sea

By A. F. Dubivko, First Captain (retired). In operation "Anadyr" – Commander of submarine "B-36" of the Northern Fleet.

In the recent years, mass media started to devote attention to the Caribbean events of 1962, in which the submarine brigade of the Northern Fleet took part.

Many of participants of those events believe that we need to encourage the truthful representation of these events by politicians, diplomats and military commanders of various levels for the purpose of studying the experience of the confrontation of on the sea, as well as for the purpose of showing the examples of patriotism, tenacity, courage, and heroism of sailors, junior officers and officers in extreme situations.

By mid-October 1962, the Navy Fleet, in accordance with the plan of Operation "Anadyr," which was carried out in order to defend Cuba, a brigade of submarines of model 641 was deployed along the Bahamas (the Sargasso Sea). At that time, those submarines, by their tactical and technical criteria and by their combat capability, were among the best diesel-electric submarines in the world with the following characteristics: tonnage on the surface 2,000 tons, under the surface – 2500 tons, speed on the surface 8 to 16, 5 knots, length of sailing at the speed of 8 knots – 26,000 miles with RDP (with diesel engines at the periscope depths), and with the speed of 7 knots respectively – 16,000 miles.

The submarine was armed with 10 torpedo launchers plus 12 torpedos in reserve, was able to submerge to the depth of 300 meters, and was capable of autonomous sailing for up to three months. At the same time, during the operation serious technical deficiencies were discovered, which will be mentioned below. They emerged as a result of the fact that the submarines were not tested properly, were not used in working regime, and appeared to be insufficiently prepared for the intense operation in the conditions of the high temperatures of the water, air, and the high salinity of the sea.

The 69<sup>th</sup> brigade of model 641 submarines was formed in the summer of 1962 from the submarines of the 4<sup>th</sup> submarine squadron of the Northern Fleet, led by the commander of the squadron Rear Admiral N. I. Yamshchikov.

It consisted of submarines "B-4", "B-36", "B-59", and "B-130". Commanders were Second Captains – R. A. Ketov, A. F. Dubivko, V. S. Savitsky, and N. A. Shumkov.

All the submarines were at high degree of combat readiness and were assigned to the first line. Rear Admiral I. A. Evseev was appointed commander of the brigade.

In my recollections, I would like to share with the readers how we were preparing, implementing the operation, and how we overcame the hardships we faced, and acted in the most difficult conditions, close to combat conditions.

We were given a task to prepare for a long-term trip to the base of one of the friendly states, which was not named. We only suspected that it would be in Africa or in Cuba, because the press actively covered development there at the time.

Approximately a month before the sail, the fully prepared submarines were relocated to settlement Gadzhievo (Saida Bay). The 20<sup>th</sup> submarine squadron, which included our brigade, was formed in the same location. Rear-Admiral Rybalko was appointed commander of the squadron.

In Gadzhievo, Commander of the Northern Fleet Admiral Kasatonov with his staff frequently visited us. The main attention during those inspections was devoted to the readiness of submarines for a long-term autonomous sail, reliability of the equipment and mechanisms, readiness of the personnel, and supply of spare parts and food rations to the full norm.

I received submarine "B-36" from the industry in Leningrad, and in 1960 I transferred it from the Baltic Sea to the Northern Fleet by sea. During that year we examined it, and passed all the necessary tests in the course of combat preparation, and the submarine entered the service for the first time.

By that time, I had nine years of experience of commanding diesel submarines of various models and worked on the Northern Fleet since 1956. I made several long-term trips and sails. I participated in the maneuvers under the leadership of the Fleet Commander Admiral Chebanenko, Commander of Submarine Forces Vice-Admiral Orel and others, which were regularly held by the Northern Fleet. The exercises, as a rule, were held in the Norwegian and Greenland seas and the northern part of the Atlantic Ocean. During the maneuvers, we worked on the submarine tactics on overcoming anti-

submarine defenses of probable enemy, and also the tactics of submarine operations in "wolf packs" under attacks of convoys and combat ships.

Therefore, personally, I was practically and morally prepared to carry out the assigned task. I was somewhat concerned by the excessive attention of the command and the headquarters of the Northern Fleet to our preparations, the loading of the torpedo with nuclear warhead, and finally by the visit of Admiral Fokin, Deputy Supreme Commander of the Navy Fleet from Moscow right before our departure.

Approximately a week before departure, Rear Admirals Rybalko and Evseev were summoned to Moscow. However, only Rybalko returned to Gadzhievo with the new commander of our brigade First Captain Agafonov. Evseev "fell ill" and was in the hospital. From our people, commander of BCh-5 (combat group?) engineer captain lieutenant Korablev also declined to go, even though he was repeatedly ordered to return from his leave. Therefore, engineer captain lieutenant Potapov, a well-prepared officer, was assigned to his position two days before the departure.

His work was supported by the flagship mechanic of our brigade engineer Second Captain Lyubimov, who was assigned to our submarine for the operation. Commander of the brigade First Captain V. N. Agafonov stayed on submarine "B-4" during the operation, and Chief of Staff Second Captain V. A. Arhipov – on submarine "B-59".

Immediately before the departure, we were given several envelopes which could only be opened after signals from the main headquarters of the Navy and an envelope with the itinerary for deployment. The latter could be open after we passed the Kola Bay.

On October 1, 1962 around midnight, the submarines of the brigade departured from Saida Bay with the interval of 30 minutes and started on their route to the ultimate destination according to each one's itinerary. They were departing in complete darkness, without turning on the sail lights. The diesel engines were turned on only after we left the bay. I did not have full confidence that our departure was completely secret. The operative service, watch crews at the posts and the ships registered the fact of our departure, and that means dozens of personnel. It cannot be excluded that the probable enemy was also aware of the date of our departure.

The envelope with the itinerary was opened after we passed the Kola Bay. The ultimate destination of the trip was Mariel Bay (close to Havana). The map identified control points, which had to be passed at the certain time determined by the main headquarters of the Navy. We had to report in secret code upon passing some of those points. The main headquarters of the Navy Fleet commanded the submarines.

Commander of the BCh-1 (combat group?) captain lieutenant V. V. Naumov and commander of the steering group lieutenant V. D. Maslov calculated the speed of movement for the whole itinerary of deployment. It had to be 12 and more knots. It is a very high speed for a diesel submarine, for which even 5 knots is quite a challenging speed. Operators of the main headquarters of the Navy, who developed the plan of our deployment understood it very well.

That meant that the higher political leadership determined the timetable of our arrival to Cuba, and we understood that. It was only possible to keep such a high speed in a surface regime, as a minimum using three diesel engines on the middle capacity. But how could we keep it secret? We were constantly reminded of the need for secrecy in all operation documents and by those who came to our departure. In this case, we were lucky with the weather. In October the weather in the Atlantic is constantly stormy with a cover of low clouds. The wind was mainly favorable to us, which meant a no-flying weather for anti-submarine aviation, which we also registered with our radio reconnaissance means. In addition, by moving with the speed of 12 and more knots, we confused the enemy who apparently knew the date of our departure and calculated our location based on the speed of 4 to 5 knots (which is the norm in operative calculation for secret movement of diesel submarines). Therefore, the massive deployment of antisubmarine forces at the defense lines Nordkap – Medvezhy Island, Iceland – Faroe Islands, Azores Islands – Newfoundland was deployed by the enemy after we have passed those lines. The groups of radio interception of open communications played the most important role in the assessment of the situation in a concrete area of operation in the practice of long-term and autonomous operations of the Northern Fleet submarines. Such a group of five specialists with good command of English was assigned to our submarine. The fact that we were moving mostly in the surface regime, made their work easier, and enabled them to make assessments of the situation on the basis of the data

from open radio intercepts. We did not just speculate, but we knew for sure that the deployment of the enemies' forces on the anti-submarine lines was carried out too late.

During the entire operation we constantly monitored the situation. Head of the radio technical service senior lieutenant Yu. A. Zhukov was the head of the radio intercept group. He was assigned the task of collecting the data, systematizing and analyzing the results of radio intercepts, and the data on the situation in the area of location of the submarine. Senior adviser of submarine commander, Third Captain Kopeikin, and assistant of the submarine commander lieutenant Andreev were also involved in the analysis of the situation.

I gave them most of the information, which from time to time was transmitted to us by the main headquarters of the Navy. Therefore, relying mainly on the data of the radio intercept group and thanks to the bad weather, we passed three anti-submarine defense lines relatively easily and entered the central Atlantic.

The only accident that slowed down our speed in the transit was the appendicitis operation on the instructor of the hydroacoustic service Pankov, which was done by captain of medical service Buinevich. One has to note that the fact that the doctor served his previous round of internship at the hospital in Polyarny City significantly helped in making the operation successful.

The wardroom, where the operation was held, was cleaned with medical alcohol. The process of cleaning and the post-operation period resulted in a significant loss of time, because everything was done in the submerged regime at the speed of 3 knots. After that we were late with our deployment by one full day.

That is why, when we were approaching the Bahamas (approximately 400-500 miles), lagging considerably behind our "moving target", we had to "catch up" with it with maximally achievable speed in the surface regime. But we were lucky once again. Big clouds, the weather that did not allow flying, and a very strong storm. The waves of 25-30 meters high were moving behind us, each one 150-200 meters from the other. The only difficulty was that at the crest of each wave the submarine would tilt by 45-50 degrees. But all the mechanisms and the accumulator battery, which we were concerned could lose the electrolyte, passed this difficult test. And we remembered all builders of

the submarine of model 641 with kind words (Leningrad plant "Sudomekh"). We were the only ones who by the will of fate were "lucky" to go through this 24-hour test with 9 degree storm in the Central Atlantic. The mechanisms, equipment and the body of the submarine passed this test. We are thankful to the designers, engineers and workers of that plant from the bottom of our hearts for the thorough construction of this model. However, the fact that the upper lid of the VIPS (imitation cartridge projection device) on the stern of the submarine was damaged during the storm, made carrying out our assignment significantly more difficult. The mechanics decided that it would be dangerous to submerge to the depth of over 60 or 70 meters with one undamaged lid. We decided to repair this damage as soon as the weather allowed. We passed the beam of the Bermudas and entered the Sargasso Sea.

In the Sargasso Sea, the weather rapidly improved, but at the same time the activity of the U.S. anti-submarine forces intensified. Therefore, we could not even think about coming up to the surface in order to repair the lid of VIPS. Any further movement along our route was possible only in the daytime in the submerged regime with electric engine and at night with RDP (with diesel engines at the periscope depths). According to the information from the radio surveillance group, and judging by the activities of the anti-submarine forces that were searching for submarines, we came to a conclusion that there were three or four aircraft-carrier based anti-submarine groups in the Sargasso Sea, as well as aircraft of shore patrol anti-submarine aviation, based in the airports of the Bermuda triangle. The cloudless weather ruled in the tropics. Airplanes and helicopters of anti-submarine defenses were searching for submarines round the clock, day and night. At night the anti-submarine aircraft were searching with radio-location stations, the work of which we could identify with our own equipment from a distance, which allowed us to avoid them by submerging early enough. By using this advantage, despite 5 or 6 urgent submergings a day on the diesel regime, we managed to fully charge our accumulator battery, which ensured the work in the submerged regime in the daytime.

Now let me turn to one more episode, which taught us how to "interact" with surface ships that were searching for submarines. Already to the south of the Bermudas, approximately 200 to 300 miles from them, we encountered three destroyers that were cruising toward us and searching for submarines with hydro-acoustic stations working in

active regime. We identified those ships earlier than we could see them visually through the periscope, and we heard the noise of their screw propellers. We managed to avoid them successfully, and then analyzed the distance from which we were able to identify the noise of the hydro-acoustic equipment of the ships in active regime, the distance of hearing the noise of screw propellers, and the distance of their visual identification, and came to a conclusion that we entered an area of higher than normal passability of acoustic waves.

This conclusion was confirmed by our hydro-acoustic station "Arctic-M," which in the northern latitudes identified the noises from the distance of several cables, but here in the Sargasso Sea, we identified the noises of the working screw propellers of the surface ships and transports from several dozens, and up to 100 cables. We were able to use these newly discovered advantages as our main strengths in our further "work" with the American anti-submarine forces.

The tense anti-submarine situation in the Sargasso Sea, and this encounter with the three anti-submarine ships led us to the thought that the Americans were already informed about the deployment of our submarines in the area of the Bermudas. In reality, at that time, all three diesel engines on the submarine "B-130" had broken down. In that hopeless situation, the submarine had to rise to the surface, which decamouflaged it and revealed the presence of other submarines. It was being towed to the base of the Northern Fleet. The American anti-submarine forces were immediately assigned to carry out intensive search for other submarines of the brigade. To our great regret, we only learned about the accident on "B-130" submarine after our return to the Northern Fleet.

The Navy headquarters had not informed us about that accident, but continued to define "B-130" submarine positions in the Sargasso Sea every time in the vicinity of our submarine.

Using the [newly] discovered benefits of our ability to locate working radio-location equipment, aviation, and noises of surface ships propellers at greater distances, our submarine managed to reach our destination position for crossing the Caicos Straights (the Bahamas) on time and without any special incidents. We reported about it to the Main Navy Headquarters. During our regular communication session, we received an order to move 100 miles back from the Straights and to take a position delimited by a

small radius. The order was carried out, and we commenced our exhausting, almost month-long work at the designated positions along the Bahamas. The positions for submarine B-130 were supposed to be next to us, more to the North from the positions for B-4 and B-59.

In order to get a receipt message to our telegram, the submarine had to submerge to the periscope depth with breaks for evading the anti-submarine operations, sometimes for several hours [at a time]. It has to be noted especially that the connection with Moscow from that distant region of the sea was unstable.

In the second part of October, the military-political situation between the two opposing sides deteriorated seriously. We did not receive any information from the Main Navy Headquarters, so we were trying to fish out various information from the radio, which allowed us to come to those conclusions. The work of the radio interception group provided invaluable assistance here. Thus, according to the information supplied by that group, it was established that:

President Kennedy announced the blockade of Cuba, and warned his people on all-American open radio about a possibility of a thermonuclear conflict with the Soviet Union;

the Americans were preparing a powerful [airborne] landing on Cuba; our missiles with nuclear warheads and the servicing personnel were already in Cuba;

special camps for future Russian prisoners of war were being set up on the Florida peninsula;

A. I. Mikoyan arrived in Cuba, he visits America periodically and conducts negotiations with the President and people from his circle;

he did not return to Moscow even for his wife's funeral.

Instructions from the Main Navy Headquarters on the need to be in constant combat readiness to use our conventional weapons also testified to the intensity of the situation. All this allowed us to make a conclusion about a possibility of a provocation on the part of the Americans. We increased our vigilance. The fact that the Americans concentrated 85% of all anti-submarine forces in the area of deployment of [our] four diesel submarines (information of the Intelligence Department of the Navy) made

carrying out our task on the designated positions extremely difficult for us. In addition to the constantly growing external pressure from the anti-submarine forces, the situation inside the submarine was becoming extremely complicated. Thus, because of the high temperature of the sea water (29-30 Celsius), the constant work of the machines, the nightly non-stop charging of the accumulator battery, the impossibility to come to the surface and carry out a good ventilation, and also because of the constant work of the regenerator equipment, the temperature in the diesel, electric engine, and two accumulator departments of the submarine reached 60-65 Celsius. It was 40-45 Celsius only in the [front and back] end sections. We sent crewmembers there for short-term rest because the personnel on duty in the mechanical sectors often fainted in 15 to 20 minutes after starting their shifts due to heat strokes. The limited reserves of the drinking water did not allow us to give [people] more than 250 grams a day—and that in the conditions of increased sweating and dehydration lead to practically 100% incidence of skin rash in an especially serious infected form among the crewmembers. People ate almost nothing. They lost approximately 1/3 of their weight. All they had to drink was the compote, with which, thanks to the rear personnel of the North Fleet, we were supplied with some excess. One has to mention that in those conditions, Deputy Commander of the submarine for political issues 3d captain V. G. Saparov and ship doctor Captain of Medical Service V. I. Buinevich exhibited their exceptional ability to work as they provided the necessary moral and medical assistance in a timely manner.

The four-hour communication sessions made our actions much more difficult. However, understanding the complexity of the overall situation, we could not allow ourselves to miss them. The success of being the first to use our weapons depended on the timely reception of the signal to start combat operations. And judging by the situation described above, we were expecting such a signal from one hour to the next.

While being deployed in the Sargasso Sea and moving from one position to the other with the help of using the benefits of long-distance identification of surface ships, we worked successfully for a long time, and were always ready to fulfill our combat task.

The Americans had also figured out that we discovered their weakness, which we were using for our purposes, and changed the tactics of search. Thus, knowing that we charged our accumulators at night, using mostly the RDP regime (i.e. with the speed of

approximately 5 to 7 knots), they deployed several anti-submarine ships along our route ahead of us, which were searching for submarines in the regime of noise interception, themselves staying still, with switched off engines and without light, in the expected area of our submarine's location. We encountered one of those ships, while in the process of charging our accumulators in the RDP regime, approximately at 2 a.m. This episode looked approximately like this: our acoustic specialist discovers an unexpected sharp noise of screw propeller of an anti-submarine ship, which suggests its proximity. It was night, calm water, clear visibility. There were no lights in the direction of the noise. It meant that the enemy turned them off on purpose. We urgently submerged and the acoustic specialist reported: "The noise has split into two, one source of noise is moving quickly in the direction of the stern." When the submarine submerged to the depths of 25 to 30 meters, the noise, which was moving in the direction of the stern, has disappeared.

The second source of noise, at the depth of our submergence of 35 to 40 meters, rolled over the deck-cabin and passed above us. Its GAS [engine] began to work in the active regime. Our entire crew could hear the thunder of the working engines of the antisubmarine ship passing above us. They all were sending reports to the central headquarters of the submarine. This is where our misconception regarding the location of "B-130" submarine played a trick on us. Because the main headquarters of the Navy always issued the positions close to ours for that submarine, and in our view, at that point it was supposed to be on the side where it could be discovered, I concluded that the first noise which passed toward the stern was precisely from submarine "B-130," and that the anti-submarine ship was tracking her. This is exactly what I wrote in the diary of the combat tour.

Firmly convinced on the basis of recent communication sessions that there were no military actions yet, I made a decision to help my comrade and to attract the attention of the anti-submarine ship to my submarine. The anti-submarine ship working against us with the hydro-acoustic station in the active regime, maintained stable contact with us – precisely what we wanted. Meanwhile, we did not exhibit any activity to get away from it, because we thought that submarine "B-130" would be able to get as far away as possible from that area.

Only after we returned to the base, we learned that submarine "B-130" at that time was located at a great distance from us.

Having mistakenly given submarine "B-130" the opportunity to move away from this area, we spent several hours without trying to break away from the surface ship that was following us. We missed one basic connection session and began active maneuvering in order to break away from the pursuit, but we were not able to do it for two reasons. Two more anti-submarine ships arrived in our area. They took positions around us and all three of them targeted us actively with their hydro-acoustic stations. Another reason, and maybe the main reason, was the impossibility for our submarine to submerge to the maximum depth to escape. As I already mentioned, we could not submerge to the depth over 70 meters, because of the broken upper lead of the VIPS (discarding mechanism for imitation cartridges). Over the next two weeks, the American anti-submarine forces did not allow us to come to the surface for repair. Maneuvering at the depth of 50 to 70 meters, and having discharged our accumulator completely, and not observing any aggressive actions on the part of the surface ships that were following us, I made a decision to come up to the surface to charge the batteries. When we came to the surface position, we identified ourselves with the main cruiser ensign (naval flag) of the USSR Naval Fleet raising it on the main antenna. Periodically, one or two antisubmarine helicopters were hovering above us. The helicopters were deploying towing GAS [engines or hydro-electric stations?] and dropped explosives [depth charges?], hovering over the bridge of the submarine, and demonstratively filming us. Along the circumference with the radius of 5 to 8 cable lengths, three anti-submarine ships were stationed, two of which soon left the area. One destroyer, number 454 "Charles Sessile", stayed in the area. They transmitted a Russian text in light Morse alphabet "Do you need help?" We responded in the same mode, "We do not need any help. Asking you not to interfere with my actions." We have to be fair to the enemy—the destroyer did not bother us, but was following a parallel course in the distance of 50 to 150 meters. They did not move farther away, knowing that that was the dead zone for the torpedoes on the submarine. The cannons on the ship were unsheathed and targeted at us. We could see that airplanes and helicopters periodically lifted off from an aircraft carrier, which we could see on the horizon. Some time later, the commander of that destroyer received an

open-radio message from President Kennedy, which was intercepted by our radiointelligence.

"Thank you for your work Keep the surfaced Russian submarine [here] by all means."

Meanwhile, we, having established in our regular communication session that the situation has not changed, began the repair of the upper lid of the VIPS (discarding mechanism for imitation cartridges) and charging the accumulator. We transmitted a report about our surfacing for charging the accumulator and about the American antisubmarine forces pursuing us to the main headquarters of the Naval Fleet 48 times, and only received a response from them on the 48<sup>th</sup> try. Now a couple of words about charging the accumulator. Because the accumulator on the submarines of our model was not equipped with cooling technology for work in the conditions of sailing in the equatorial latitudes, the charging took very long because of the high temperature of the electrolyte, which reached 65 °C. With such temperatures, the situation is aggravated by the fact that the electrolyte expels hydrogen very intensively. In order not to allow an explosive concentration and to reduce the temperature of the electrolyte to at least 60 °C, at which it was permitted to turn on the accumulator charge, we had to ventilate it intensively. The charging took 36 hours instead of normal 10 to 12 hours. During that time, we repaired and fortified the upper lid of the discarding mechanism for imitation cartridges (by doing which we removed the limitation on the depth of the submarine submerging), analyzed the situation, and developed an escape plan. In order to do it, we had to disorient the forces pursuing us, by changing our course to the reverse, imitating movement toward the Caicos straits. Then, following the ideas of the head of the radiotechnological service senior lieutenant Yu. A. Zhukov and Major of the hydro-acoustic group sub-lieutenant Pankov, we rearranged the blocs of GAS (Hydro-Acoustic Station)"Sviyaga" in order to produce a powerful signal at the frequency of the hydroacoustic station of the anti-submarine ship, which was following us. The purpose was to disrupt its work in the active regime in the first minutes of breaking away, and to submerge to the maximum depth. We broke away from the anti-submarine ship in the daytime after lunch, choosing the moment when there were no helicopters and antisubmarine aircraft in the area. We dove under the anti-submarine ship and moving at full speed submerged to the depth of 180-200 meters. Then, changing our course by 180° and moving in zigzag, we broke away from the pursuers very fast. Meanwhile, in the initial period of our escape, we employed several long (5 to 6 seconds) transmissions in the circular regime on the hydro-acoustic station "Sviyaga" in order to suppress the active work of the hydro-acoustic equipment of the anti-submarine ship. Apparently, this trick, and the fact that we quickly submerged to the maximum depth, ensured our successful disengagement from the pursuit by the anti-submarine forces. We reported to the main Navy Headquarter about our escape, and received the response immediately following the first session. Having deployed in the new position and having learned from bitter experience the new technology of anti-submarine search, which was used by the ships in the nighttime (without working engines, without lights, searching only with passive methods, and so on), we also adjusted to that, and changed our tactics of work on positions. Now, as soon as the navigational dusk fell, we carefully visually studied the horizon and, if we could surface to the stationary condition, stayed still in that position without moving, did some physical exercises, ventilated, determined our position by the stars, and so on. In other words, if they were searching for us with their passive methods, without moving engines, then we also were spending the night without moving and were engaged in our routine tasks in a stationary mode. One has to note, that such tactics of work never betrayed us for approximately two weeks, until the end of our stay in the Sargasso Sea. We were on the mark. We never allowed any more encounters with surface ships at night in positions, where they could discover us with their passive and active search means. The only inconvenience was the anti-submarine aviation. However, at night they were flying not as actively as in the daytime and they had to use radiolocation for search, and as I already noted, we could discover the work of radiolocation equipment at some distance, which allowed us to successfully avoid [being discovered] by submerging. Despite the fact that sometimes we had to urgently submerge up to six times during one night, and to engage in secret search, and despite the fact that we constantly were in a four-hour state of readiness to use our weapons, we have successfully carried out our assignment.

We were ready to carry out that combat assignment even when we were left with one diesel engine on November 7, being on our last position (approximately 300 miles

south-east of the Bahamas), because of the tiredness of the personnel both of our side diesel engines broke. We had to ensure not only the fulfillment of the combat task, but also our return, which we were expecting judging by the information, which we were able to fish out from the open radio (the withdrawal of our missiles from Cuba had begun), with only one middle diesel engine. Now, because of the technical conditions of using only one middle diesel engine, we could charge the accumulator only in a stationary mode without movement in the daytime, using electric engines under the water. In both cases, we ensured our superiority in terms of search. On the second day of work in this last position, helicopter carrier "Tetis-Bay" occupied the center of the deployment area.. We had to leave our position without the permission from the main Navy Headquarters and to move 100 to 200 miles to the south, because the helicopters and aircraft from that helicopter carrier prevented us from working either in the daytime or at night. Therefore, in the immediate vicinity from "Tetis-Bay" (holding it as a target in case the situation had gotten worse), we spent the rest of our days there until we received orders to return to the base.

Our return, like the entire trip, was done secretly. The skills that we acquired in our "practice" with the American anti-submarine forces, allowed us to successfully avoid them. And, we have to say that now at the line Iceland-Faroe Islands we had to face an especially tense situation. However, there was no mass concentration of forces, like the one that was organized by the American anti-submarine forces in the Sargasso Sea, throughout our entire return trip. Apparently, over the period of that month, the Americans got exhausted, and the British did not have appropriate forces in order to put substantial pressure on the returning submarines. And maybe the fact that we only had our middle diesel engine working, and that we were moving very slowly, 6 to 7 knots speed, played its role.

As I already noted, on November 7, 1962, both of our side diesel engines shut down. However, the engine crew under the leadership of commander of BCh-5 (combat group?) engineer-captain Potapov and commander of the group senior engineer-lieutenant Kobyakov were able, by mobilizing their last strength and working without breaks in the time free of shifts, to assemble one more diesel engine from those two broken ones, by the time when we were entering the Norway Sea. That allowed us in

some cases to use the RDP regime for the purposes of secrecy. But our situation became more difficult when while approaching Iceland we ran out of fuel. Relying on the experience of the submarine sailors of the Great Patriotic War, we decided to make the last section of our trip on oil, which we mixed with normal water. Responding to our request to refuel, a fuel tanker came to meet us near the Lofoten (??) Islands. However, due to bad weather, it was impossible to pass the refueling hose from the tanker to the submarine. At the same time, at the traverse "Nordkap," all our oil reserves ran out. In the last small section of the trip, we had to move using the sea water, the idea of our main chemist Yuri Klimov (under the electric engines). We returned to the base in the last third of December, being the last sub of our brigade. Chief of staff of the brigade Second Captain Arhipov was the only person who came to meet us.

Shift officers: senior assistant Third Captain Kopeikin, assistant captain-lieutenant A. P. Andreev, commander of BCh-3 captain-lieutenant A. A. Muhtarov and commander of the torpedo group lieutenant V. M. Kutin carried out their intense and difficult service throughout the entire sail. The pressure by the American anti-submarine forces and our direct contacts with them helped the officers to perfect their tactical knowledge on practice in the most difficult sailing conditions, and in the situation close to combat. And during our sailing in the Atlantic, all the shift officers had to engage in astronomical practice (determining our location using sextant mainly by the stars at the time of navigational dusk). By finding the median value of four or five such identified locations, they helped commander of BCh-1 captain-lieutenant Naumov and commander of the steering crew senior lieutenant Maslov considerably throughout the trip, so that in the end they could arrive at its final destination (Caikos (?) Straits) in Sargasso Sea with a very insignificant deviation, and then return to the base. The most significant deviation [from the course] (approximately 8 miles) occurred right after the storm in the area of the Bermudas.

One cannot fail to mention the selfless work of all the personnel in the most difficult conditions that I already mentioned. During our month-long stay in the tropics, when the sailors often fainted on their shifts due to high temperature and stress, we have not received a single complaint from them. The only requests were to be able to go to the end sections in the front or the back to relax a little or to go outside to catch a breath of

air on the bridge when the submarine was in the stationary mode. Each member of the crew honestly and faithfully fulfilled his duty. That observation is further demonstrated by the fact that by the end of the trip 20 crew members became candidate-members of the CPSU.

On the next day after we returned to Gadzhievo, I was summoned to the Commission of the main Navy Headquarters to analyze the trip. The Commission was headed by Rear Admiral P. K. Ivanov – head of the Department of Combat Preparedness. Unfortunately, the work of the Commission on analyzing the actions of the submarines in extraordinary conditions, according to the established at that time practice, was aimed exclusively at uncovering violations of orders, documents, or instructions by the commander or by the personnel. They did not take into account the conditions or the reasons, which forced us to act differently. We were accused of violating the secrecy, failing to abide by NIS-58 (instructions for submarine forces) while trying to avoid the anti-submarine aircraft of the United States and the anti-submarine ships discovered by us. However, they did not take into account the fact that if the commander abided by NIS-58, which was written by Rear Admiral P. K. Ivanov among others, then the submarine would never have been able to arrive at the final destination, and even less so to the new positions issued by the main Navy Headquarters.

Still, later the General Staff made a correct judgment regarding the actions of the submarines during the Caribbean events, i. e. that the requirements of NIS-58 on the issue of avoiding the anti-submarine forces were developed for simple routine tactical conditions, which assume short-term contacts of submarines with one or two airplanes or one or two anti-submarine ships. The conditions, in which our submarine brigade had to work, were so difficult in the tactical, moral and physiological sense, that we were happy that we returned from that trip alive and healthy. This feeling was confirmed by member of Military Council of the Northern Fleet Rear Admiral F. Ya. Sizov at his meeting with officers, when he said, "We did not expect you to come back alive..."

The only person, who gave the deserved credit to the actions of the submarine commanders, was Commander-in-Chief of the Navy Admiral S. G. Gorshkov.

I personally saw his resolutions on the reports of the Commission. Here is one of them: "The commander knew better how to act on that difficult situation... Do not punish the commanders."

Some time later, all the commanders, who took part in the trip, were summoned to Moscow for personal reports to the USSR Defense Minister. Marshal R. A. Malinovsky was ill, and Marshal Grechko received our reports at the Collegium of the Defense Ministry. My report was the last one. During the break, Marshal Bagramyan approached me and suggested that I should give special attention to the issues of communications. I did that. Marshal Grechko refused to listen to my report on the problems and difficulties of the trip. He was unable to understand why a submarine would have to charge its accumulator battery every night, and why it would have to be in the RDP or stationary mode to do that. The only thing he understood was that we violated the secrecy requirements, were discovered by Americans, and that for some time we stayed in close contact with them.

We learned about his reaction to our reports on the next day from First Captain Ignatiev (Head of the Third Section of the Operations Department of Navy General Staff). It was approximately as follows: "I would have better sunk than come to the surface..."

From our radio intercept information, we knew that President Kennedy was informed that we had to come to the surface to charge our accumulator battery, that also meant that he must have known about submarines B-130 and B-59, which had to come to the surface earlier. Therefore, three Soviet submarines had been reliably identified in the area of the Bermuda triangle. Still, most likely, the Americans could not have known the total number of the deployed submarines. That is why the deployment of the 69<sup>th</sup> submarine brigade of the Northern Fleet close to the American shores, and their monthlong confrontation with the anti-submarine forces of the US Atlantic Fleet in the Bermuda Triangle, in the situation close to combat, without doubt helped the Soviet leadership to put additional pressure on the American side for the purpose of successful resolution of the crisis.

The presence of the underwater threat from the sea could have significantly influenced the plans of U.S. airborne invasion of Cuba.

For the first time since World War II, the American coast was threatened, but this time by the Soviet submarines. 85% of the U.S. anti-submarine forces of the entire Atlantic was engaged against the four submarine of our brigade—this information was later confirmed by the Navy Intelligence Department. We had accumulated extensive operative and tactical experience on confronting those anti-submarine forces as well as on exploitation of the mechanisms and equipment of the submarines of this model in the tropics.

The material parts—diesels, water coolers, rubber, internal and external lids, air compressors—malfunctioned because of the difficult weather conditions; the isolation of the radio antennas weakened, and so on ...

That experience, which was gained through such hardships, had to be pulled together from all the submarines, analyzed, and shared with other Fleets. To my regret, the Operations Department of the Navy General Staff failed to do that.

My personal memory will always preserve my meeting with Fidel Castro. In the early spring of 1963, he with a large delegation was a guest of the Northern Fleet Commander Admiral Kasatonov. Apparently, they wanted to show Fidel the people who were helping him in those difficult days of the Caribbean Crisis. Our B-36 submarine, and another diesel submarine armed with three ballistic missiles under the command of Second Captain Kosov arrived to Severomorsk for the meeting with Castro. We were waiting for his visit for two days, but Fidel Castro only visited the missile-armed submarine. They demonstrated the design of the missile complex for him.

Unfortunately, he only looked at our submarine. It is possible that the Cuban leader now had some information about our trip, but then, in the October days of the crisis year 1962, he most likely had no idea about our underwater Odyssey.

In concluding my memoirs, I would like to once again express my appreciation and gratitude to the entire crew of B-36 submarine for exhibiting high standards of resistance and valor throughout the trip, and for helping me, as the commander, to affirm our dedication to the Navy and to our Motherland.