

The Submarine In The Andes: Rise Of A Non-State Navy?

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On Sept 7, 2000, Colombian National Police entered a bodega in Facatativa, a small village near Bogotá. Acting on tips from members of the village, they expected to find drugs, weapons or other various tools used to proliferate the violence that has torn Colombia's social fabric for decades. What they found instead astounded experts from various Colombian and U.S. agencies: Three modules of a double-hulled submarine approximately 30%-40% completed¹. Obviously unable to abscond with their property, the "owners" vacated the premises leaving behind a \$25 million dollar² piece of hardware with a variety of potential uses. Unfortunately, they left behind few clues as to what they planned to use the vehicle for, let alone why they were building it in the middle of the Andes, far from any coast. This mystery demands serious scrutiny, as the purpose (or purposes) behind the submarine's procurement may hold grave implications for the United States and Colombia.

The first question to be asked must obviously be "Why build a submarine in the middle of the Andes"? One would normally expect to assemble a submarine at a shipyard in or near a harbor with ocean access. However, this assumes a legitimate owner/operator not concerned with the general public knowing about their project. One can assume from the secrecy involved in the construction of the sub, along with the hasty exit made by the workers, that the intended uses of this sub were less than legitimate. But why, then, did these owners/buyers want to outfit and assemble the sub in a city so far from the ocean? Since no government organizations suspected that a group of foreigners was building a submarine in this remote location until tipped of by an anonymous local resident, the advantage of secrecy could have factored in. The proximity to Colombia's capital city, Bogotá, may have played a role as well, facilitating the acquisition of high-grade construction materials and equipment³. But did these advantages outweigh the obvious risks and complications involved with later transit to a feasible final assembly and launching point? Apparently they did.

But how did the Colombians come by the political and business connections required to order and clandestinely receive a submarine hull? One may assume by the Russian documents confiscated with the submarine, that Russian contacts were somehow involved in either the acquisition and/or construction process of the submarine. Stalisnar A. Osipov, an intelligence officer at the Russian Embassy

¹ Associated Press. (2000, September 7). "Colombia Cops Find Submarine Big Enough For Tons Of Drugs." Retrieved 25 June 2001 from the World Wide Web:

<http://www.cnn.com/2000/WORLD/americas/09/07/colombia.drugsub.ap/>

² Darling, J. (2000, 11 November). "Submarine Links Colombian Drug Traffickers With Russian Mafia." The Los Angeles Times. Retrieved 25 June 2001 from the World Wide Web:

<http://www.drugtext.org/press/webster/nov00/%5B%5D%20Submarine%20Links%20Colombian%20Drug%20Traffickers%20With.htm>

³ Selsky, Andrew. (2000, 1 October). "Colombian Drug Submarine Mystery Fascinates Police, Locals." (Newspaper Article from the Tampa Tribune). Retrieved 25 June 2001 from the World Wide Web:

<http://www.drugtext.org/press/webster/oct00/%5B%5D%20Colombian%20Drug%20Submarine%20Mystery%20Fascinates%20Pol.htm>

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in Bogotá said the submarine could not have been built without Russian technology⁴. This Russian connection speaks volumes about the likelihood that Russian criminal organizations were somehow involved. In her November 10, 2000 article on the submarine issue, Juanita Darling indicates that strong ties exist between the Russian criminal organizations and the Colombian narcotraffickers⁵. Darling cites Colombian counter narcotics officials as saying that the Cali cartel has been supplying cocaine to Moscow and St. Petersburg through their Russian contacts. Although experts have speculated at Russo-Colombian connections over the past decade, the submarine provides the first tangible evidence of any significant partnership. Unsubstantiated rumors of additional sales of Russian military equipment to FARC guerrillas continue to circulate, including the FARC's supposed acquisition of Russian shoulder-launched anti-aircraft missiles, tanks, and other military hardware. Other sources add that the Cali cartel has been trying to buy a submarine from the Russians since 1995, although no purpose was specified⁶. Based on this evidence, we can more comfortably accept the premise that somehow Russian organized crime organizations managed to purchase or broker, then ship submarine technology and equipment to Colombia.

But what would the drug cartel want to do with a submarine? The most fascinating of all, this question might be the least explored of the entire incident. No one has stepped forward and offered alternatives to the argument that the submarine must be for drug transshipment. However, considering the many missions that a submarine can perform, a thorough review of all its potential uses should be considered before a final assessment is made. To begin, we must evaluate what this particular submarine would be capable of doing, depending on its final configuration. Then, we can speculate as to what the submarine's buyers could have done with it.

Colombian naval experts have commented that the construction and materials of the submarine are highly advanced. The hull, although only 30%-40% complete, reveals some of the capabilities the end customers desired. Some general observations, along with a comparison between this vessel and the North Korean Sang-O class submarines⁷ will allow us to make a respectable approximation of the Colombian sub's performance characteristics. Based on such a comparison, we can assume a speed of 4-6 knots and a range of 700 nautical miles.

⁴ Stratfor Global Intelligence. (2000, 1 October). "Colombia y la Conexión Rusa." (From Colombia Analitica Website). Retrieved 25 June 2001 from the World Wide Web: <http://colombia.analitica.com/cpi/9447904.asp>

⁵ Darling, 2000.

⁶ Ibid.

⁷ "Captured North Korean Submarine." (1994). Retrieved 25 June 2001 from the World Wide Web: <http://webtagon.com/submarines/korea/koreansub.htm>

Captain Ismael Idrobo, Projects Director for the Colombian Naval Academy, assessed that the double hull would allow an operational depth of 325 ft (99m)⁸. The rounded propeller supports this assessment, as it indicates the submarine was designed to operate in shallow waters. The Sang-O class submarine also comes with a shrouded prop, which allows the North Koreans to "bottom" the submarine on the ocean floor. Sitting in virtual silence, the vessel and crew can avoid detection by sonar.

The submarine discovered in Colombia was incomplete, with the conning tower most notably absent. This superstructure acts as an airlock on the Sang-O subs, so we will assume the same capability with the completed Colombian sub also. The external frame of the sub possesses no fittings for towing, and engineers assess that by this stage of construction, such fittings would have to be in place. Therefore, we assume that the vehicle is not designed to be towed by a surface vessel for long periods of time. Additionally, no internal bays for undersea weapons deployment (such as mines or torpedoes) were fitted into the hull. The external hull of the submarine has been perforated with symmetrical holes at regular intervals along the sub. Colombian experts assess they were to be used for a very advanced ballast system⁹. As far as total cargo, Leo Arreguin, the DEA administrator in Colombia, reported that the sub could carry up to 200 tons of cocaine when he addressed the press after the submarine was discovered¹⁰. Colombian naval officials more conservatively assessed the sub could carry 11 tons of cocaine¹¹. The total amount of cargo space available inside the sub will depend significantly on how the operators intended to outfit the interior after the mandatory engine, batteries, and control consoles were installed, and on how much weight the sub could additionally carry externally. An assessment of approximately 10-15 tons of cocaine seems reasonable for our purposes, since we cannot be sure of the ultimate internal configuration of the submarine. These figures can be compared to the 260 tons of cocaine experts estimated Colombia transported to customer nations last year¹².

On a final note, although not impacting the initial performance of the submarine, we must consider the maintenance of the vessel and the training of the crew. If the end recipients of the sub could afford \$25 million for the vehicle, surely they could afford expert training for new crewmembers or even buy a crew outright. Maintenance, as well, could be either by contract or by externally trained maintainers. However, a facility must be made available for such work, and to date, no designated facility

⁸ Associated Press. (2000, September 8). "210 Miles From Pacific Ocean, Drug Smugglers Try to Build Sub." New York Times. Retrieved 25 June 2001 from the World Wide Web: <http://www.drugtext.org/press/webster/sep00/%5B%5D%20Drug%20Smugglers%20Try%20To%20Build%20Submarine.htm>

⁹ Selsky, 2000.

¹⁰ Associated Press, 2001.

¹¹ St. Petersburg Times Online. (2000, 8 September). "Colombia's New Cocaine Carrier: A Big Submarine. (compiled from Times Wires). Retrieved 25 June 2001 from the World Wide Web: http://www.sptimes.com/News/090800/Worldandnation/Colombia_s_new_cocain.shtml

¹² Ibid.

has been found. Nor, for that matter, has any intended assembly/launch area for the sub been pinpointed. Granted, unless the proprietors intended to have a dry-dock built and maintain their new purchase in the same manner as the U.S. Navy, then any number of non-descript buildings along the coast of Colombia would serve adequately as an assembly or maintenance facility. In conclusion, then, we are looking at a submarine with a range of approximately 700nm at slow speeds, operating at shallow depths, capable of on-loading/off-loading personnel and small cargos underwater via an airlock, and able to carry approximately 10-15 tons of cocaine or similar payload as cargo. Based on this capability assessment, we will now examine the question of what the Colombians would want to do with such a submarine as this.

From this point on, however, the term "Colombians" will be too vague. It could imply the government, the drug traffickers, or the guerilla groups in that country. And, depending on the exact group discussed, the likelihood of a potential employment of the submarine could vary greatly. We can obviously rule out the government from consideration. Not only does the Colombian Navy already possess three submarines, if they desired another, they would pursue legitimate avenues to acquire it. The paramilitaries have also been ruled out of consideration because they have not professed any desire to pursue naval power, and their mission of protecting principally landlocked villages from the FARC does not require one. The guerrillas (in particular the FARC) on the other hand, could employ a submarine to promote their cause in several ways, as could the narcotraffickers. And, since the drug cartels have supplied the guerrillas with weapons in the past, establishing the narcotraffickers as initial purchasers of the submarine does not necessarily prove they will be the end users. With this in mind, we will examine not only multiple missions the submarine could perform, but also multiple end-users and their individual probabilities of using the sub for a specific purpose.

One theory on the submarine suggests that its purchasers intended to use it as a recovery vessel. The guerrillas have not lost any equipment that we know of that could possibly serve as a motivator for them to purchase a \$25 million submarine to recover it. The narcotraffickers, on the other hand, have dumped shipments of drugs overboard on numerous occasions and could have adequate cause to retrieve them. However, the submarine design doesn't support this argument. The sub's operational depth limitation (approximately 325 ft.) would not allow it to recover loads dropped any significant depth, and any diver descending below approximately 100 ft. would require highly specialized training and equipment. Granted, the operation of a submarine would also require highly specialized training and equipment. Still, the design of this vessel (very conventional, with no external windows or lights for outside searching) suggests a definite lack of specialization for this task. Sonar tracking of loads carrying a beacon could be used to localize a dropped shipment, but the complexities involved with getting a beacon to activate, getting the submarine within range of the active beacon, and being able to put out divers to retrieve the cargo through the airlock (it should be large enough to merit a complicated retrieval operation) seem extremely unlikely. Besides, the narcotraffickers have still been able to flood existing

markets with their current level of losses, which seems to be a minor consideration. Finally, to be able to recover drugs dumped overboard from any given shipment, all drug cargos would have to be fitted with a tracking device – an expense the frugal drug traffickers seem unlikely to assume. Overall, the submarine seems to be the wrong tool, and an expensive one at that, for this job.

Another use for the submarine could be as a transport vessel. But transport for what? Both the guerillas and the narcotraffickers have key personnel that cannot move freely about the country because they are followed continuously. A submarine, however, would allow such individuals the luxury of disappearing from a harbor town or pleasure craft and literally resurfacing anywhere they chose – at least, anywhere with a coastline – completely free from surveillance by government agencies, would-be assassins, or other watchful eyes. Would this capability be worth \$25 million to an organization? Quite possibly. With the same impunity, cargos of money could also be moved, virtually free from the risk of interception, to nearby Panama – a global center for money laundering. Illegal shipments of weapons could be moved as well. In particular, biological weapons or weapons of mass destruction could be moved with relative ease across borders. However, this last theory seems improbable at the present time, considering the global distaste toward the use of biological and nuclear weapons – even by terrorist groups. The FARC would be even less likely to use such weapons, considering the monumental negative backlash it would create among the citizens they intend to govern one day. Should escalation in the conflict between the U.S.-Colombian forces and the insurgents or narcotraffickers occur, however, the potential for the non-government organizations to use weapons of mass destruction would increase. In conclusion, the sub could be used to transport a variety of cargos, most likely key members of clandestine organizations.

And yes, the submarine could be used to transship drugs out of Colombia. The question is, why would the drug cartels consider this extremely expensive, high maintenance solution to a problem they solved years ago for a fraction of the cost? To date, the narcotraffickers have used a mind-boggling array of methods to transport drugs to consumer nations. They move them in planes, go-fast boats, cargo ships, inside of people, animals, lollipops, surfboards, and more. With all these methods of shipping, the U.S. is able to confiscate approximately 10-15% of the 260 (and climbing) tons of cocaine that Colombia sends to the United States, fueling a \$38 billion market. In fact, so much cocaine reaches North Americans right now, that the price of cocaine is actually dropping slightly. So, why would the Colombians want to buy a submarine to traffic drugs to a market that already appears saturated? Especially when one container on a cargo ship can hold up to 200 tons of cocaine, and can be hidden among 200-300 other containers on a given transport. Or when a transport aircraft can move the same quantity of cocaine as the submarine up the land bridge to Mexico, virtually within sight of the U.S. border, but almost 50 times faster. Additionally, the narco-fleet of go-fast boats still poses a problem for U.S. vessels to monitor, let alone pursue. And we haven't even touched the extremely creative ends to which human carriers are willing to

go to in order to make a profit as "mules". With such a successful transportation network in place already, why would the narcotraffickers sink millions of dollars into a single craft when they could have multiple transports – all of which are tested and proven – in place already? Especially when the United States, the authority they are attempting to avoid, is the premier submarine hunting power in the world. Would the submarine have any better chance of avoiding U.S. detection than the other methods currently in use? Is there so much to gain that, after buying such a high-value asset, the cartels would risk it in the field against the world's foremost conventional military power? True, the submarine would be able to carry 4% of the narcotraffickers' assessed annual product to vendors to the north, potentially cutting out some middle-men and increasing profits. But does the potential for loss merit the effort expended in acquiring the submarine, training its crew, and implementing a new distribution strategy? There doesn't seem to be any real force driving the cartels to purchase such a drastically different drug trafficking platform. And yet, within a month, the story was out of the press, and the intelligence community at large had labeled the submarine a drug transport and nothing more. Clearly, this platform is capable of carrying much more than drugs.

Just as the United States and other navies use their submarines to transport nuclear weapons, the narcotraffickers could potentially have used their submarine to transport drugs, personnel, or any number of payloads. And, just as the navies of the world use their submarines in a maritime attack role, so the narcotraffickers or the guerrillas could employ a submarine to perform this mission, although in a different manner and against different targets. From the drug cartels perspective, the set of targets worth engaging would most likely be limited. Any attack against U.S. Navy or Coast Guard vessels would have to be weighed very carefully. The two most likely reactions by the United States, either pulling out of the maritime drug interception mission completely, or massively stepping up our commitment to maritime operations, are extremely opposite of each other, making the business of predicting either outcome exactly a very sticky proposition at best. The first reaction to the successful sinking of a U.S. ship by a Colombian submarine would be a recall of our remaining counter-drug platforms from the waters within the scope of the conflict. It would be the result of the U.S. domestic lobby arguing against risking further high-value assets in a struggle that has only marginally crimped the flow of drugs into our nation. The opposite, and much less favorable reaction for the narcotraffickers would involve a military escalation in the region, especially on the part of the Navy and Coast Guard, to retaliate against maritime drug transshipment, and especially, on the part of the Navy, to seek and destroy the submarine involved in the attack. This course of action does not seem likely for an organization that has spent its entire existence running from drawn-out armed confrontations with military forces. We seriously doubt that the cartels or the guerillas would attack U.S. vessels, but we acknowledge that the situation in Colombia could change, and we therefore refuse to let this potentiality drop completely from our realm of speculation.

But could a submarine like this actually sink a ship? One method would be to release divers

through the airlock to covertly place explosives on the bottom of ships moored in harbors, much like the Italian frogmen of WWII¹³. Another method, dating back even farther, would be to use the submarine itself to place charges on the target vessels, much the way confederate submarine Hunley did to the USS Housatonic during the American Civil War¹⁴. If a submarine powered by eight men pedaling to turn the propeller shaft could do it, then certainly a modern, diesel submarine would have no problems repeating the feat. Mines could also be deployed from the sub in the same manner the North Koreans use their Sang-O class subs to deploy bottom mines. Regardless of the method, some force would need to be driving the narcotraffickers to take such a risk before they actually did so. The question is, has the decision been made, or is the submarine just a sort of insurance policy in case the drug war heats up?

The guerrillas could also make use of an attack submarine, but for very different reasons. Although they might further their cause by attacking U.S. ships as previously described, there are other, more lucrative and less risky targets to be engaged. The Colombian oil industry, for example offers a prime target for both the FARC and ELN. The ELN would benefit from attacks against foreign oil companies' rigs in Colombia's territorial waters (although the FARC might also consider Venezuelan targets), and a submarine would be the perfect vehicle to use for attacking oil platforms at sea. An attack would also discourage future exploration of Colombia (and Venezuelan) offshore reserves. The FARC, on the other hand, almost certainly sees the same target, but with a different view. Colombia exported over 3 billion barrels of oil for a profit of approximately \$3 billion last year alone, and the guerrillas have spent years extorting their cut of these revenues. What more perfect vehicle to hold the oil companies hostage than a submarine driving silent and unseen beneath the water, able to blow the legs out from under a platform or sink a supertanker with no warning? Or sink a supertanker loaded with oil for export? The oil companies would almost certainly agree to a straight, off the top cut for the guerrillas in exchange for the safety of their crews and capital. And the guerrillas would be able to focus their troops elsewhere instead of chasing after kidnap victims and blowing up pipelines. Assuming the FARC received the same amount of money from the oil industry as it does from the drug industry, they would have substantially increased their annual income, which already exceeds \$400 million USD annually¹⁵.

In conclusion, the submarine found in the village of Facatativa was, for about a month, a fascinating story. But the story it could not tell, about its intended mission, has failed to baffle analysts as much as it should. By thinking "in the box", we may have overlooked some other, equally probable uses for this highly specialized piece of equipment. In so doing, we may have overlooked a potential threat to U.S. and Colombian interests. The submarine could have been designed to perform multiple missions,

¹³ McRaven, W. (1995) *Spec Ops: Case Studies in Special Operations Warfare: Theory and Practice* (pp. 73-114). Presidio Press: Novato, CA.

¹⁴ Retrieved 25 June 2001 from the World Wide Web: <http://www.cla.sc.edu/sciaa.hunley1.html>.

not just drug transshipment. The ultimate reason for building the submarine may remain a mystery for now, but when another sub is successfully fielded by a non-state Colombian actor, we will need to be ready to act properly. Doing so may be impossible in a timely fashion if we do not spend the time now to analyze the situation and let our analysis provide the basis for our preparation for the future.

¹⁵ Villamarín, A. (1996). The FARC Cartel. Ediciones El Faraon: Bogotá, Colombia.