

In race against clock, expanding fleet of ships searches for submersible lost near Titanic wreck

June 21 2023, by PATRICK WHITTLE and HOLLY RAMER



OceanGate CEO Stockton Rush emerges from the hatch atop the OceanGate submarine Cyclops 1 in the San Juan Islands, Wash., on Sept. 12, 2018. Rescuers in a remote area of the Atlantic Ocean raced against time Tuesday, June 20, 2023, to find a missing submersible before the oxygen supply runs out for five people, including Stockton, who were on a mission to document the wreckage of the Titanic. Credit: Alan Berner/The Seattle Times via AP

In a race against the clock on the high seas, an expanding international armada of ships and airplanes searched Tuesday for a submersible that

vanished in the North Atlantic while taking five people down to the wreck of the Titanic.

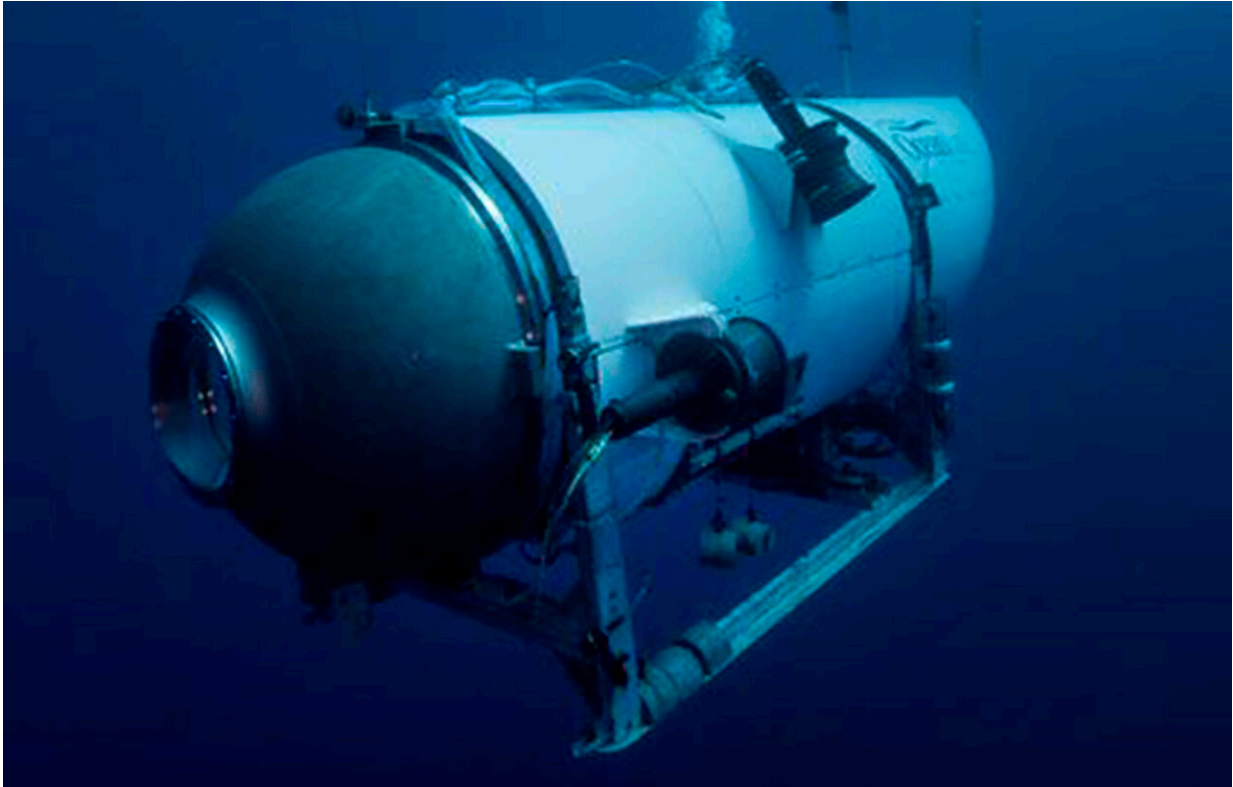
U.S. Coast Guard officials said the search covered 10,000 square miles (26,000 square kilometers) but turned up no sign of the lost sub known as the Titan. Although rescuers planned to continue looking, time was running out because the vessel would have less than two days of oxygen left if it is still intact and functioning.

"This is a very complex search, and the unified team is working around the clock," Cpt. Jamie Frederick of the First Coast Guard District in Boston told a news conference.

Frederick said the crew would have no more than about 41 hours of oxygen remaining as of midday Tuesday. That means its air supply could run out Thursday morning.

He added that an underwater robot had started searching in the vicinity of the Titanic and that there was a push to get salvage equipment to the scene in case the sub is found.

Three C-17 transport planes from the U.S. military have been used to move commercial submersible and support equipment from Buffalo, New York, to St. John's, Newfoundland, to aid in the search, a spokeswoman for U.S. Air Mobility Command said.



This undated photo provided by OceanGate Expeditions in June 2021 shows the company's Titan submersible. On Monday, June 19, 2023, a rescue operation was underway deep in the Atlantic Ocean in search of the technologically advanced submersible vessel carrying five people to document the wreckage of the Titanic, the iconic ocean liner that sank more than a century earlier. Credit: OceanGate Expeditions via AP, File

The Canadian military said it provided a patrol aircraft and two surface ships, including one that specializes in dive medicine.

Authorities reported the carbon-fiber vessel overdue Sunday night, setting off the search in waters about 435 miles (700 kilometers) south of St. John's. At the helm was pilot Stockton Rush, the CEO of the company leading the expedition. His passengers were British adventurer Hamish Harding, two members of a Pakistani business family and a

Titanic expert.

The submersible had a four-day oxygen supply when it put to sea around 6 a.m. Sunday, according to David Concannon, an adviser to OceanGate Expeditions, which oversaw the mission.

CBS News journalist David Pogue, who traveled to the Titanic aboard the Titan last year, said the vehicle uses two [communication systems](#): text messages that go back and forth to a surface ship and safety pings that are emitted every 15 minutes to indicate that the sub is still working.



In this photo released by Action Aviation, the submersible Titan is prepared for a dive into a remote area of the Atlantic Ocean on an expedition to the Titanic on Sunday, June 18, 2023. Rescuers raced against time Tuesday, June 20, to find the missing submersible carrying five people, who were reported overdue Sunday

night. Credit: Action Aviation via AP

Both of those systems stopped about an hour and 45 minutes after the Titan submerged.

"There are only two things that could mean. Either they lost all power or the ship developed a hull breach and it imploded instantly. Both of those are devastatingly hopeless," Pogue told the Canadian CBC network on Tuesday.

The submersible had seven backup systems to return to the surface, including sandbags and lead pipes that drop off and an inflatable balloon. One system is designed to work even if everyone aboard is unconscious, Pogue said.

Eric Fusil, director of the University of Adelaide's Shipbuilding Hub, said there are other scenarios that could cut communications, including an electrical fire that could create toxic fumes and render the crew unconscious.

Another possibility is that Titan became entangled in the wreck of the Titanic and is stuck there, Fusil said.



In this photo provided by Blue Origin, NS-21 (New Shepard-21), astronaut Hamish Harding receives his Blue Origin astronaut pin after a successful flight to space on June 4, 2022, in Van Horn, Texas. According to Action Aviation, a company for which Harding serves as chairman, the U.K. businessman was one of the mission specialists onboard a missing submersible carrying five people to view the wreckage of the Titanic that was reported overdue late Sunday, June 18, 2023. Credit: Felix Kunze/Blue Origin via AP

"What I would like to believe ... is that Titan suffered from a [power loss](#), but they could still go back to the surface" and be spotted by aircraft and ships, he said.

Experts said the rescuers face steep challenges.

Alistair Greig, a professor of marine engineering at University College London, said submersibles typically have a drop weight, which is "a mass they can release in the case of an emergency to bring them up to the surface."

"If there was a [power failure](#) and/or communication failure, this might have happened, and the submersible would then be bobbing about on the surface waiting to be found," Greig said.

Another scenario is a leak in the pressure hull, in which case the prognosis is not good, he said.

"If it has gone down to the seabed and can't get back up under its own power, options are very limited," Greig said. "While the submersible might still be intact, if it is beyond the continental shelf, there are very few vessels that can get that deep, and certainly not divers."



In this photo released by Action Aviation, the submersible Titan is prepared for a dive into a remote area of the Atlantic Ocean on an expedition to the Titanic on Sunday, June 18, 2023. Rescuers raced against time Tuesday, June 20, to find the missing submersible carrying five people, who were reported overdue Sunday night. Credit: Action Aviation via AP

The Canadian research icebreaker Polar Prince, which was supporting the Titan, was to continue conducting surface searches with help from a Canadian Boeing P-8 Poseidon reconnaissance aircraft, the Coast Guard said on Twitter. Two U.S. Lockheed C-130 Hercules aircraft also conducted overflights.

The Canadian military dropped sonar buoys to listen for any sounds from the Titan.

OceanGate's expeditions to the Titanic wreck site include archaeologists and marine biologists. The company also brings people who pay to come along. They take turns operating sonar equipment and performing other tasks in the submersible.

Rush told The Associated Press in June 2021 that the Titan's technology was "very cutting edge" and was developed with the help of NASA and aerospace manufacturers.

"This is the only submersible—crewed submersible—that's made of carbon fiber and titanium," Rush said, citing a design that includes 5-inch-thick carbon fiber and 3.25-inch-thick titanium.



U.S. Coast Guard Rear Adm. John Mauger, commander of the First Coast Guard District, talks to the media, Monday, June 19, 2023, in Boston. A search is

underway for a missing submersible that carries people to view the wreckage of the Titanic. Canadian officials say the five-person submersible was reported overdue Sunday night about 435 miles (700 kilometers) south of St. John's, Newfoundland and that the search is being led by the U.S. Coast Guard. Credit: AP Photo/Steven Senne

Passengers included Harding, who lives in Dubai in the United Arab Emirates; Pakistani nationals Shahzada Dawood and his son Suleman, whose eponymous firm invests across the country; and French explorer and Titanic expert Paul-Henry Nargeolet.

Greg Stone, a longtime ocean scientist based in California and a friend of Rush, called the lost submersible "a fundamentally new submarine design" that showed great promise for future research. Unlike its predecessors, the Titan was not spherical and instead relied on a cylindrical shape that tapers at one end.

"Stockton was a risk taker. He was smart ... he had a vision. He wanted to push things forward," Stone said.

The expedition was OceanGate's third annual voyage to chronicle the deterioration of Titanic, which struck an iceberg and sank in 1912, killing all but about 700 of the roughly 2,200 passengers and crew. The wreckage was discovered in 1985 and has been slowly succumbing to metal-eating bacteria.



U.S. Coast Guard Rear Adm. John Mauger, commander of the First Coast Guard District, speaks to the media, Monday, June 19, 2023, in Boston. A search is underway for a missing submersible that carries people to view the wreckage of the Titanic. Canadian officials say the five-person submersible was reported overdue Sunday night about 435 miles (700 kilometers) south of St. John's, Newfoundland and that the search is being led by the U.S. Coast Guard. Credit: AP Photo/Steven Senne



In this photograph released by Action Aviation, company chairman and billionaire adventurer Hamish Harding looks out to sea before boarding the submersible Titan for a dive into the Atlantic Ocean on an expedition to the Titanic on Sunday, June 18, 2023. Rescuers raced against time Tuesday, June 20,

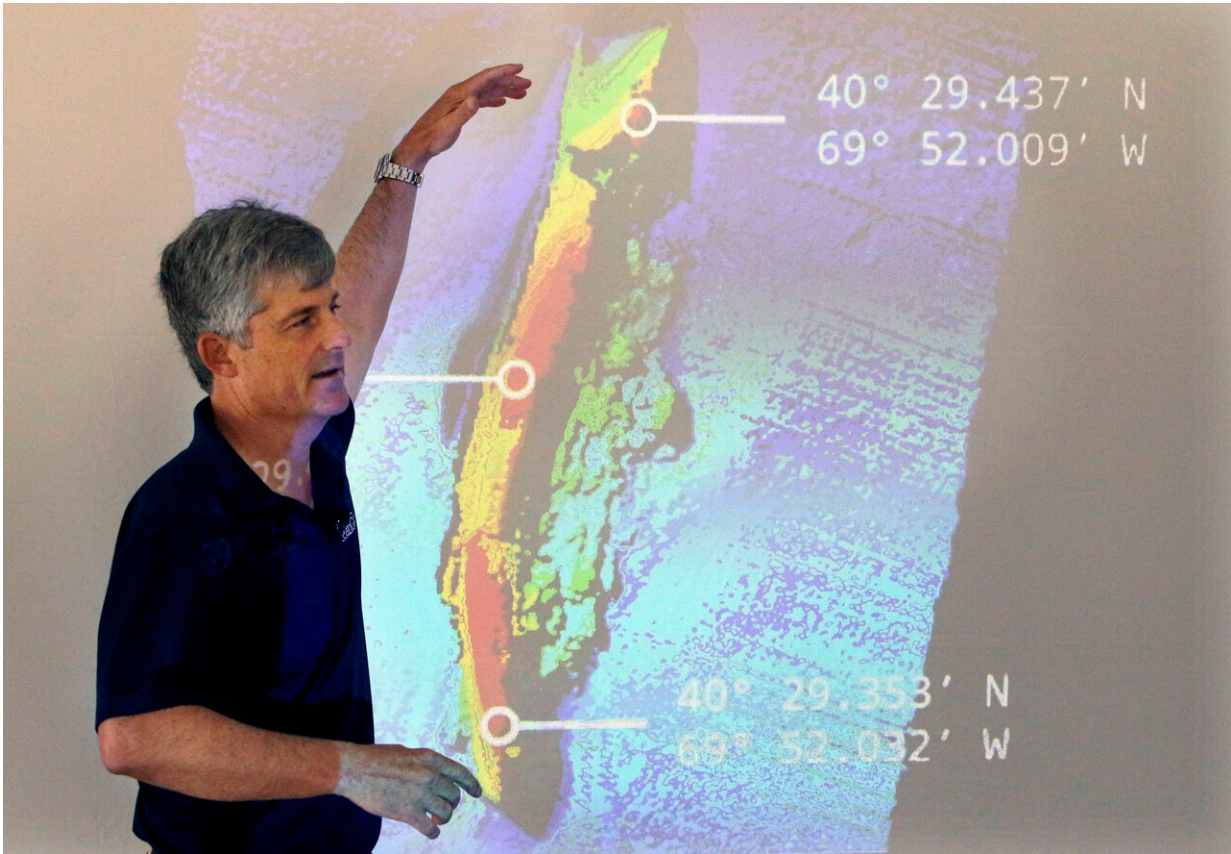
to find the missing submersible carrying Harding and four other people, who were reported overdue Sunday night. Credit: Action Aviation via AP



OceanGate CEO Stockton Rush is seen on Oct. 22, 2013, in Seattle. Rescuers in a remote area of the Atlantic Ocean raced against time Tuesday, June 20, 2023, to find a missing submersible before the oxygen supply runs out for five people, including Rush, who were on a mission to document the wreckage of the Titanic. Credit: Greg Gilbert/The Seattle Times via AP



Conservation International's Greg Stone, a marine biologist who helps run the Hawaii Undersea Research Laboratory at the University of Hawaii, travels in the Pices V submersible off the coast of Hawaii's Big Island in this Sept. 6, 2016, file photo. Credit: AP Photo/Caleb Jones, File



OceanGate CEO and co-founder Stockton Rush speaks in front of a projected image of the wreckage of the ocean liner SS Andrea Doria during a presentation on their findings after an undersea exploration, on June 13, 2016, in Boston. Rescuers in a remote area of the Atlantic Ocean raced against time Tuesday, June 20, 2023, to find a missing submersible before the oxygen supply runs out for five people, including Stockton, who were on a mission to document the wreckage of the Titanic. Credit: AP Photo/Bill Sikes, File



U.S. Coast Guard Capt. Jamie Frederick, front, faces reporters during a news conference, Tuesday, June 20, 2023, at Coast Guard Base Boston, in Boston. The U.S. Coast Guard says a search covering 10,000 square miles (26,000 square kilometers) has turned up no signs of a missing submersible off New England. Authorities made the announcement Tuesday. Credit: AP Photo/Steven Senne



U.S. Coast Guard Capt. Jamie Frederick, center left, faces reporters as Coast Guard Chief Public Affairs Specialist Robert Simpson, right, looks on during a news conference, Tuesday, June 20, 2023, at Coast Guard Base Boston, in Boston. The U.S. Coast Guard says a search covering 10,000 square miles (26,000 square kilometers) has turned up no signs of a missing submersible off New England. Authorities made the announcement Tuesday. Credit: AP Photo/Steven Senne



U.S. Coast Guard Capt. Jamie Frederick, center, faces reporters during a news conference, Tuesday, June 20, 2023, at Coast Guard Base Boston, in Boston. The U.S. Coast Guard says a search covering 10,000 square miles (26,000 square kilometers) has turned up no signs of a missing submersible off New England. Authorities made the announcement Tuesday. Credit: AP Photo/Steven Senne

OceanGate's website described the "mission support fee" for the 2023 expedition as \$250,000 a person.

Recalling his own trip aboard the Titan, Pogue said the vessel got turned around looking for the Titanic.

"There's no GPS underwater, so the surface ship is supposed to guide the sub to the shipwreck by sending text messages," Pogue said in a segment

aired on "CBS Sunday Morning." "But on this dive, communications somehow broke down. The sub never found the wreck."

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