

# Mystery Whereabouts Of The Long Lost WW II Submarine USS O-9 Solved.

*During A Test Dive Off The Coast Of New Hampshire, The USS O-9 Failed To Surface. The Location And Reason For The Loss Remained A Mystery For Over 56 Years. A High Tech Sonar Search Conducted By Klein Associates During September 1997, Successfully Located The Submarine.*

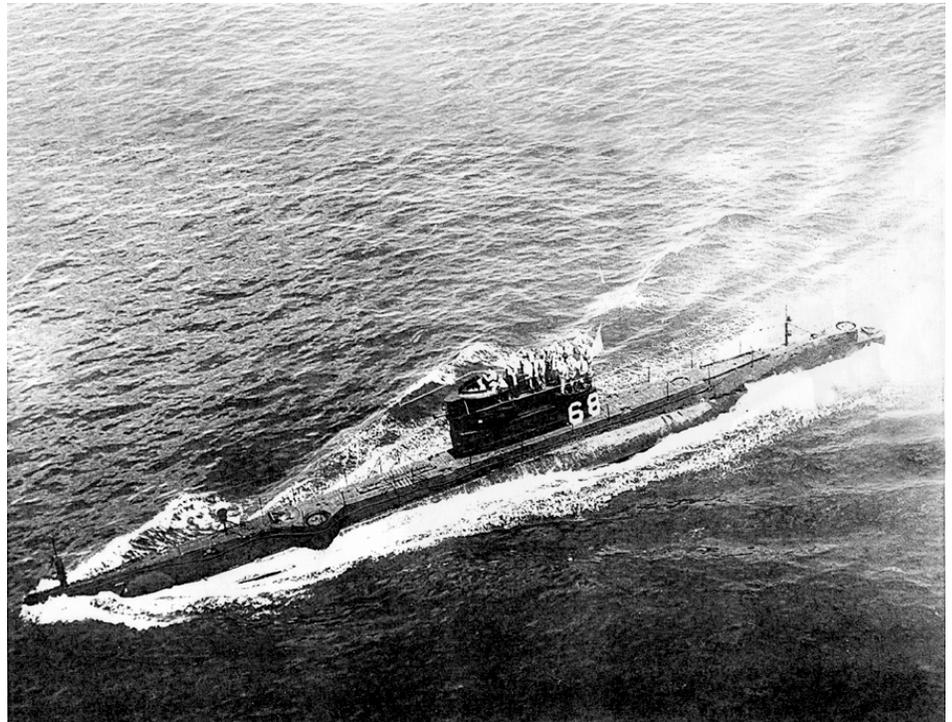
**By Garry Kozak**

Regional Marketing Manager  
Klein Associates, Inc.  
Salem, N.H. 03079

**June 1941, World War II** is raging in Europe and in the U.S. the Navy is mobilizing every possible submarine resource available. The USS O-9, a recently re-commissioned WW I submarine, is undergoing final deep dive trials off Portsmouth, N.H. On the morning of June 20, 1941, the USS O-9 with 33 crew on board, slipped beneath the cold North Atlantic never to be heard of or seen again.

## History

The O-9 (SS-70), along with the O-3 through the O-10, was built in Quincy, Massachusetts by the Fore River Ship Building Company. She was commissioned for the first time on July 27, 1918. The O-boats were 172 feet in length with a beam of 18 feet, displaced 480 tons on the surface, and 629 tons when submerged. On the surface the O-9 was powered by two, six-cylinder Nelseco diesel engines built by the New London Ship and Engine Company. Submerged propulsion was provided by two slow-speed, direct drive electric motors which also served as generators when charging the batteries. The O-class armament consisted of four 18 inch torpedo tubes and a 3 inch, 23 caliber deck gun. Test depth for the O-class boats was 200 feet.



**O-Class Submarine like the lost O-9 Boat**

After WW I the O-9 was engaged in general peace time duties. In 1931 she was decommissioned and laid up in Reserve at the Philadelphia Navy Shipyard. She laid rusting and nearly forgotten until WW II. With the expanding war in Europe, the Chief of Naval Operations called for all available decommissioned submarines to be made ready for active service, the O-9 being one of these. The O-9 was re-commissioned on April 14, 1941 but like many reactivated boats, still needed lots of shipyard work. Work on the O-9

progressed slowly through most of April and May. On May 31 the O-9, in company of the O-10, left Philadelphia for New London, arriving there on June 2. For the next 16 days the two submarines made short trips in and out of port passing tests on their sea trial agenda. The trials included shallow water test dives which were successful. The O-9 suffered several minor equipment breakdowns, and during one early dive reported as many as 19 leaks. Repairs were made and on June 19 she left in company with the O-10 and O-6 for deep submergence trials off the coast of New Hampshire.

## Disappearance

On the morning of June 20, in an area off Portsmouth N.H. known as the submerged operating area A, the three submarines rendezvoused to begin deep dive trials.

The O-6 was the first submarine to dive at 0617 and surfacing at 0704. The O-10 was next commencing her dive at 0735. She reached a depth of 225 feet and surfaced at 0824. The O-9 submerged at 0837 starting her first deep dive.

One hour passed and the O-6 and O-10 became concerned since the O-9 had not surfaced yet. They were joined by the Grenadier, another submarine doing trials nearby, and the three began a search for the now over-due O-9. Attempts to communicate by oscillator, used for submerged subs, proved futile.

Nearby, the submarine rescue vessel USS Falcon, was practicing four point mooring over a simulated sunken submarine. When word of the O-9's failure to surface reached shore, she was ordered to immediately cease exercise operations and to proceed to the O-9 submergence area to join the search. Other submarines in the area, the Triton (SS-201), Grayling (SS-209), and Trout (SS-202) were also ordered to the site. A comprehensive visual search and passive sonar search were begun in the area of the last known position of the O-9.

At approximately 1630 the O-10 discovered an oil slick on the surface of the water. At 1850 the Triton recovered a piece of wood decking with the missing boats number on it. At 2224 the Falcon sighted a large patch of air and oil on the surface. A small boat was launched with dragging equipment, and at 2330 and 0020 crewmen snagged a large object with their grapples. The water depth was 430 feet. The Falcon anchored near the spot for the night to await daylight and the arrival of its sister rescue ship, the USS Chewink.

## Dive Attempt

The available evidence seemed to indicate that the O-9 was destroyed by the tremendous pressure, and that all her crew were probably dead. This did not deter the Falcon from attempting to put a diver on the bottom, even though the Navy had never attempted to work in this depth before.

The Falcon with the assistance of the Chewink, went into a four-point-moor

over what was suspected to be the O-9. At 1400, June 21, the first diver entered the water using a 80/20 heli-ox mix. In 7 minutes he had successfully reached 370 feet, at which time he aborted the dive due to inadequate gas supply. At 2026, a second diver entered the water using a 90/10 gas mix and a gas pressure of 300psi. This was well above the 250psi pressure rating on the dive hose and added a new element of risk for the diver. This diver reached 380 feet but due to a sloping down line, became very fatigued and aborted the dive.

June 22, 0719, diver R.L. Metzger entered the water and succeeded in reaching the bottom in 440 feet at 0728. He quickly swung around the down line, shining his underwater light, and thought he saw what he describes as a white line and white half moon shape. He did not leave the down line due to the poor visibility. His bottom time was 45 seconds and he was unable to confirm whether he really saw the O-9.

At 0955 the next diver, C. Conger, left the surface and reached the bottom at 1004. He stated he thought he could see a loom of a large dark object, but again was unable to confirm if it was the O-9.

Upon the completion of Conger's dive it was decided that the chance of any crew members still being alive was nil and that the continuation of diving operations was too hazardous. Operations were abandoned and on June 22 at 1700 memorial services were held onboard the Triton above the supposed O-9 resting place.

## Boston, March 1996

The annual Boston Sea Rovers Film Festival was in full swing, thrilling attendees with underwater adventures and stunning photographic images. Glenn Ream, a Sea Rovers member and marine historian approached me with his research on the O-9 and the fact that the mystery of where she lays has never been solved. Glen asked me if Klein would be interested in using our latest digital side scan sonar system to search for the O-9. The challenge was gladly accepted.

## The Search

October 1996; the University of N.H. research vessel *Gulf Challenger* heads for an area off the Isle of Shoals which has been determined from the old

Navy records to be the likely position of the O-9. A Klein System 2000, the latest all digital high performance side scan sonar has been installed on-board and is integrated into the shipboard Raytheon differential GPS and track plotting navigation system. On site, the side scan towfish is deployed on a 300 meter towable, and the hunt begins. The weather is marginal making the running of the survey lines uncomfortable in the beam seas. A 4 square mile area is completed with no indication of the lost submarine. It is realized that the old Navy position fixes on the possible resting place for the O-9 are significantly in error. On the ride back to Portsmouth, new scenarios were debated on why *She* was not found where the old Navy records said she should be.



Klein System 2000 Sonar Display Unit

August 27, 1997; the *R/V Gulf Challenger* departs Portsmouth for the final attempt to solve the Mystery of where the O-9 rests. It has been decided to expand around the area searched last year with more emphasis to the North. This was supposedly the heading of the submarine when last sighted on the surface before disappearing. To cover more area it was decided to run the sonar at a 450 meter range per side compared to last year's survey at 300 meters per side. The tradeoff is the possibility of missing the sub if a bow on or stern on aspect is encountered relative to the survey lines. The day dragged on with no indication of the O-9 and it was looking more and more that success may be out of reach. The wind and sea state had picked up considerably from the morning, and holding lines in the 6 foot seas was becoming difficult at our slow towspeeds. Discouraged that no targets of the O-9's size had been found, the last survey line of the day was begun. Half way down the line, 400 meters out on

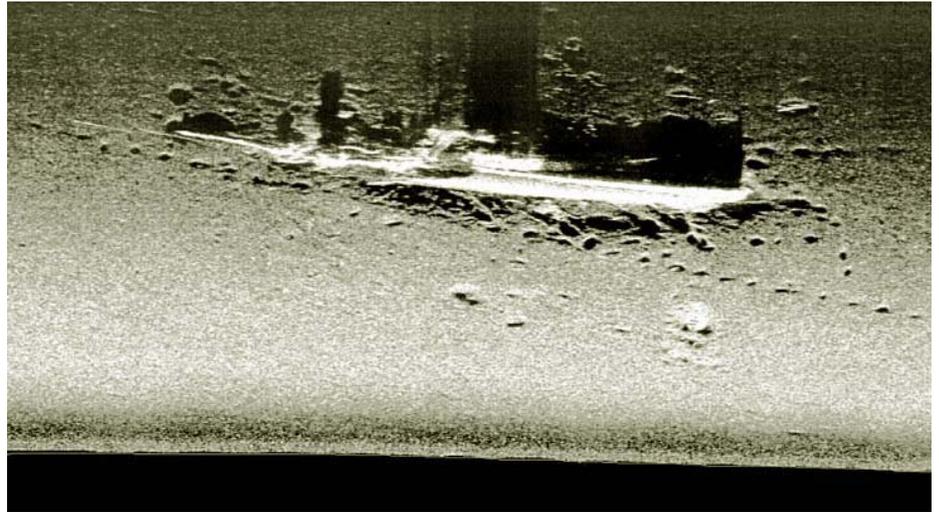
the starboard side, a significant size contact was located. The ship was turned to make a closer pass on a shorter range to try and classify if this could be the O-9. The size of the target was in the ball-park for the O-9, but due to the seas and heave action on the towfish, the sonar images were too distorted to conclusively say this was the sub. On the steam back to port, the data was closely analyzed and the conclusion was reached that this was probably the O-9.



**Congressman Bass and Garry Kozak with sonar towfish**

September 15, 1997; the weather was perfect, and seas calm for the cruise to image and conclusively classify if this was the resting place of the O-9. Joining the search team on-board the *R/V Gulf Challenger* was New Hampshire Congressman Charles F. Bass, and members of the local WWII Submariners Veterans group. On site the sonar was deployed and a survey line run past the previously located target. The first high resolution 500 kHz image out of the Klein System 2000 left no doubt, this was the O-9.

The sonar image clearly showed the hull of the O-9 lying with a port list on the mud sea floor. The conning tower and forward part of the submarine are completely intact. The aft part of the O-9's hull from the conning tower back shows clear evidence of a severe hull collapse. The reason for the hull failure will never be known.



**Klein System 2000, 500 kHz O-9 sonar image**

Emotions were high among the old submariners, knowing that 450 feet beneath us lay the remains of the O-9 and her 33 crew members. The sonar was recovered and Captain Paul Pellitier positioned the *R/V Gulf Challenger* directly over the O-9. A memorial service lead by Congressman Bass and the Submariners was held in memory of those who lost their lives. A wreath was placed upon the water and a moment of silence and reflection was observed by all participants on-board. Closure had finally been brought to the mystery of where the O-9 lay.

#### References

1. Naval History, Fall 1991, The Loss of the USS O-9, Eric R. Kennedy.
2. US Navy Action Report, June 28, 1941, Serial 819, Loss of USS O-9 (SS-70), 20 June 1941.



*Garry Kozak has over 25 years experience in underwater search and survey operations and is a world recognized expert in side scan sonar interpretation. He is presently employed by Klein Associates as sales manager.*