SECTION IV

U.S.S. PERCH (SS176)

Loss in Action

Java Sea
3 March 1942

Class.....SS173

Builder..... Electric Boat Co., Groton, Conn.

Commissioned..... 19 November 1936

Length (Overall)..... 300 ft. 6-3/4 in.

Beam (Extreme)..... 25 ft. 1-1/2 in.

Submergence Depth (Designed Maximum) (Axis)..... 250 ft.

Displacements

Standard..... 1330 tons

Emergency Diving Trim..... 1725 tons

Submerged..... 2005 tons

Draft (Mean, Emergency Diving Trim)..... 16 ft. 11 in.

Type of Propulsion..... Diesel Electric Reduction Drive

Main Engines (4)..... Winton 16-201A

Main Motors (8) and Generators (4)..... General Electric Co.

References:

(a) Enclosure (B) to ComSubsPacAdmin secret ltr. FF12-10(A)/A4-1(1)/A16-2, Serial 00349 of 21 September 1945 (Commanding Officer PERCH Statement Concerning Loss of Vessel).
(b) ComSubsPacAdmin ltr. FF12-10(A)/A16-2, Serial 3599 of 12 October 1945 (Statements of Two PERCH Crew Members Concerning Loss of Vessel).
(c) ComSubsPac Report Entitled "Enemy Anti-Submarine Measures", no date or file number given (Account of Loss of PERCH).
(d) Account of Loss of PERCH as Related to Cdr. I.F. Duff,(MC), USNR, by Lt.Cdr. J.J. Vandergrift, Jr., USN, on 5 April 1946.

Photograph No. 4-1

4-1. On 2 March 1942, while operating in the Java Sea on her second war patrol, PERCH sustained severe depth charge damage which prevented further submerged operations and reduced her maximum surface speed to about 5 knots. Shortly after dawn on 3 March, PERCH was deliberately scuttled by her own crew to prevent imminent capture by Japanese surface forces. This report is based on the information contained in references (a) through (d). These references are accounts furnished from memory by various survivors of PERCH upon their release from Japanese prisoner of war camps at the end of the war, almost four years after the action took place. It naturally follows that the source data are not as complete and cannot be considered to have the same degree of accuracy as formal war damage and action reports written shortly after an action.

4-2. After normal refit, PERCH departed Port Darwin, Australia, for her second war patrol on 3 February 1942. At this time the Japanese campaign to secure the Netherlands East Indies was in full swing. PERCH was directed to patrol and perform reconnaissance in various positions in the Java and Flores Seas as part of the force then attempting to defend Java.

4-3. On the night of 25 February 1942, while patrolling the southern approaches to Kendaris, Celebes, PERCH sighted a Japanese supply ship and commenced approach for a surface attack. However, the enemy ship opened fire and scored one three-inch shell hit on PERCH which struck the light fairwater plating just forward of the conning tower proper and detonated inside the "doghouse". The pressure-proof radio antenna trunk and 200-pound air line to the whistle were ruptured, several electrical cables were cut by shrapnel, and the pressure-proof magnetic compass trunk system was flooded. Action was terminated without further damage. Temporary repairs were made by ship's force to the radio antenna trunk which permitted subsequent radio transmission.

4-4. The following night, PERCH was ordered westward into the Java Sea after a large Japanese convoy of troopships had been sighted near Bawean Island with apparent intentions of landing forces on Java. On 27 February, the Battle of the Java Sea occurred, ending all organized Allied surface resistance in the East Indies area. The Japanese landed on the northern coast of Java on 28 February. That night PERCH received notification of the exact landing point of the convoy and was ordered to disregard previously assigned areas and to attack.

4-5. On the next night, 1 March, PERCH was still proceeding west toward the designated landing area, and had reached a position about twelve miles northwest of Soerabaja, when two Japanese destroyers were sighted. PERCH was at this time running on the surface so she made a quick dive to avoid detection. There was a full moon and visibility conditions were excellent. The destroyers passed well clear astern and out of torpedo range but turned back after proceeding about four or five miles. One of the destroyers then came in close

on a course favorable for stern torpedo shots and PERCH made ready for attack, taking frequent periscope observations. However, on the last periscope check before firing, it was noted that the target destroyer, which was distant about 800 to 1000 yards at this time, had obviously detected PERCH and was charging in at high speed for an attack.

4-6. The Commanding Officer, believing he was in 200 feet of water, immediately ordered depth increased to 180 feet. When PERCH had reached a depth of about 90 to 100 feet, however, the destroyer passed directly overhead and dropped several depth charges. This first pattern was not close and caused no appreciable damage. Shortly afterwards, PERCH struck bottom at about 147 feet depth with her propellers still turning over and while in this position received a second pattern of four depth charges, this time very close. This group of charges was apparently dropped by the second destroyer. Considerable damage was sustained aft and all main motor field relays tripped, causing temporary loss of propulsion. While still on the bottom, a third and final depth charge pattern was received very close aboard amidships. The enemy destroyers then ceased further attacks, apparently convinced that PERCH had been destroyed, although they remained in the immediate area.[1]

4-7. Extensive damage was caused by the second and third depth charge patterns. As mentioned previously, all main motor field relays tripped, causing temporary loss of propulsion until they were reset. The pressure hull was dished inward by as much as 2-1/2 inches in the after battery compartment on the starboard side forward and the port side aft. The conning tower plating was depressed to a depth of about 2 inches over an area about three feet by one foot. The engine room hatch, conning tower hatch and conning tower door gaskets were crimped and leaked steadily. The inboard hull flapper valves for the ship's supply ventilation system and the engine air induction system were jammed closed. MBT No. 5 master vent valve also jammed in the closed position. The battery exhaust system outboard valve apparently opened momentarily upon one or more close detonations and sea water flooded the exhaust duct section in the control room, some of it splashing onto the fire control panel. The high pressure air bank in the after battery well commenced to leak heavily. Both main batteries showed full ground. No. 2 periscope could not be moved. No. 1 periscope could be raised and lowered but required the combined effort of four men to train it. Ninety per cent of the gauges and instruments in the engine room were broken or deranged and several depth gauges were also put out of commission. Considerable inboard leakage occurred through a cracked weld at the hull flange of the air conditioning circulating water supply system.

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[1] A list of anti-submarine attacks, received from the Japanese at the end of the war, which were assessed as resulting in "positive" sinkings, mentions several attacks in this area on 1-2 March 1942 but no amplifying data was submitted and none can be definitely identified as having been made on PERCH.

4-8. It is interesting to note that although this first series of attacks was sufficiently severe to cause considerable permanent hull deformation, the watertight integrity of the hull proper remained substantially intact and no serious damage was sustained at this time by either the submerged propulsion plant or vital auxiliary systems and equipment. It is probable that all of the depth charges were set for detonation at 98 feet since the next deeper setting available on Japanese charges was 197 feet and the depth of the water in which the attack occurred was reported to have been only about 150 feet, a fact certainly known to the enemy.

4-9. Shortly after receiving the third depth charge pattern, PERCH got underway again and by using evasive tactics managed to lose both destroyers in about two hours. At about 0300, 2 March, PERCH surfaced and an inspection topside was made. All the radio antennae insulators were found to have been broken. An armful of fragments from the depth charge cases was picked up on deck. Both periscope head windows were shattered and both periscope tubes had completely flooded. The bridge blinker light was found compressed flat.

4-10. No. 1 main Diesel engine ran away on starting and the camshaft of No. 4 main engine was found broken, leaving only two main engines in operating condition. No. 2 main engine was put on battery charge and No. 3 main engine was put on propulsion. PERCH once again proceeded in the direction of the Japanese landing on Java, still with intentions of attacking the enemy. Repairs to damage were started where possible and the high pressure air banks were replenished.

4-11. At about 0400, approximately two hours before sunrise, the same two Japanese destroyers were again sighted. PERCH immediately submerged and lay on the bottom in about 200 feet of water with all machinery secured. This course was chosen rather than evasive running for the machinery had developed a high noise level as a result of the previous attack and it would have been necessary to use the very noisy trim pump almost constantly in order to maintain depth control.

4-12. Unfortunately, the enemy destroyershad either sighted PERCH before she submerged or had established definite sound contact, for several depth charge attacks were immediately delivered, resulting in serious damage. An attempt was then made to get under way and take evasive action but the propulsion plant was found to be inoperative, due to short circuits in the electrical control gear or damage to the main motors, and PERCH was forced to remain on the bottom. Following this series of attacks, the enemy destroyers apparently decided to postpone further efforts until daylight but in the meantime made frequent checks on PERCH's position by echo-ranging.

4-13. Shortly after sunrise, three more attacks were delivered, the final pattern of three charges at about 0830 being the most severe of all. The enemy destroyers then left the area, probably again certain that they had destroyed their target.

4-14. Reference (b) reports that "there was hardly any part of the boat that had not in some way been damaged." Only one of the four main Diesel engines was not damaged beyond immediate repair. However, the two auxiliary engines (Winton 6-241) were still operable. The port reduction gear casing was cracked and lost lubricating oil constantly. As mentioned above, the submerged propulsion plant was put out of commission due to deranged control equipment and motor damage. Numerous holding down bolts on the main motors, main generators and main engines were reported to have broken.

4-15. The pressure hull overhead in the forward battery compartment was dished inward to a depth of about 1-1/2 inches over an area of about 6 feet by 2-1/2 feet and many other new indentations occurred at various points along the length of the ship in addition to those received from the first series of attacks. In no place, however, was the pressure hull torn or ruptured.

4-16. All lighting was cut off by a close detonation but was partially restored after a short while. Many auxiliary motors were short-circuited or deranged. There were at least nineteen cracked jars in the forward battery and one in the after battery, causing loss of electrolyte and full grounds. All of the electric alarm and telephone circuits were out of commission.

4-17. One particularly close detonation forward caused the bow planes, then on 20 degrees rise angle, to partially rig in, damaging the bow plane rigging system. The holding down studs for the bow plane tilting motor backed off or elongated and the shims dropped out. The planes were thereafter tilted by hand. The radio antenna trunk flooded. The JK sound head was put out of commission. Torpedoes loaded in forward tubes Nos. 1 and 2 and one torpedo loaded in an after tube were reported to have made "hot" runs. Many torpedo tube doors were jammed. All water closet bowls (porcelain) were shattered. The engine room deck support stanchions were torn away at their overhead connection to the pressure hull.

4-18. Both Nos. 1 and 4 high pressure air banks bled completely down through numerous leaks and various other air system leaks developed throughout the boat. The increase in pressure of the atmosphere within the boat from these air leaks was considerable although it could not be measured since the barometer was broken. The excessive air pressure, extreme heat, and high humidity caused much discomfort and had a deleterious effect on all hands.

4-19. Sea water leakage into the pressure hull also increased markedly. Strips a quarter of an inch square in cross section had been cut from the conning tower and forward escape trunk door gaskets. Leakage around these doors and the conning tower and engine room access hatches became serious. The air conditioning circulating water supply hull flange crack, caused by the first series of attacks, became enlarged and the flange studs elongated or the nuts backed off, further augmenting the leakage at this point. Many

other salt water systems throughout the ship also developed leaks. Fuel tanks are reported to have leaked externally.

4-20. PERCH remained on the bottom until after sunset on the evening of 2 March. Order was restored and repairs to equipment were attempted where possible during this period. Damage to one of the main motors was isolated and battery propulsion was regained on both shafts. Bilges were kept pumped down to avoid grounding electrical machinery. The forward and after trim tanks and No. 2 auxiliary tank were pumped dry.

4-21. At about 2000 on 2 March, after approximately sixteen hours submerged, the first attempt was made to surface. The boat did not move, however, for the downward thrust of the depth charge attacks had partially embedded the hull in the soft ocean floor and many master vent valves leaked or could not be seated, rendering it impossible to blow the ballast tanks since air introduced into the tanks escaped through the risers. As an indication that the boat had been forced deep into the soft bottom, it was noted during the final severe depth charge pattern that PERCH's remaining depth gauge suddenly changed reading from 200 feet to 228 feet and then to 230 feet, although this might have been due to derangement of the gauge itself.

4-22. By closing the emergency vent valves and going alternately ahead and astern at maximum revolutions on both shafts, PERCH finally broke loose from the bottom on her third attempt. These efforts consumed a period of about one hour and all high pressure air was expended except for one partially filled bank. The enemy was not in sight upon surfacing.

4-23. After successively attempting to start all four main engines, only No. 3 engine was found operable and PERCH got under way at a speed of about 5 knots. About half of the holding down bolts for the No. 3 engine had broken and the engine vibrated so badly that the head covers raised one inch. The batteries were put on charge with the undamaged auxiliary Diesel generators. The steering gear was behaving erratically at this time, for the rudder could be moved from the full left position only with difficulty and upon reaching amidships would suddenly snap over hard against the starboard stops. MBT No. 2 was leaking heavily from sea. Even on the surface, sea water leakage into the hull was sufficient to keep both the trim and drain pumps operating at full capacity. All gyro-repeaters had been deranged and steering was accomplished by relaying word to the bridge from a man stationed at the master gyrocompass in the control room. Many depth charge case fragments were again found on the deck topside.

4-24. After quickly surveying the condition of the boat, the Commanding Officer at this time set up procedure for scuttling the ship if it became necessary. Repairs were attempted where feasible. Men working in the engine room were unable to tolerate the extreme heat and had to be relieved frequently so they could go topside to recover.

4-25. PERCH continued to run on the surface throughout the night. In order to determine whether or not the boat could submerge, it was decided to try a running dive while still dark. This was attempted about an hour and a half before sunrise on 3 March. However, in spite of having deliberately tried to make the ship light so that trim could be established by flooding in on the dive, PERCH was found very heavy aft. The boat assumed a large up angle and water entered in large volume around the conning tower and engine room hatches which failed to seat properly. When a depth of 75 feet had been reached and the two hatches still showed no sign of seating themselves by hydrostatic pressure, the boat was surfaced. Reference (a) reports that at this time there was still only one full air bank. By the time PERCH reached the surface, the water level in the engine room bilges was almost to the main generators.

4-26. It was found that the conning tower hatch lacked complete seating by a gap of about 3/8 inch. The hatch dogs were removed and adjusted but with no improvement. This work was handicapped by the necessity of having to keep the ship darkened to avoid detection. Once again the dogs were removed, but while attempting further adjustments, three Japanese destroyers came upon the scene and opened fire on PERCH. Five or six shells landed in the water nearby.

4-27. PERCH attempted to engage the enemy with her three-inch deck gun but it could neither be trained nor elevated and the sights were shattered. Torpedoes could not be fired. In this helpless condition, with no fire power, obviously unable to submerge and capable of making only 5 knots on the surface, the Commanding Officer decided to abandon and scuttle the boat at once. All hands were ordered topside. The diving alarm was sounded and the vents were opened by one officer who had remained below for this purpose. The men on deck literally felt the ship, which was still going ahead at one-third speed on her batteries, go out from under them. All the men leaving the ship were equipped with life jackets and some in addition carried escape "lungs" and flashlights. The officer who manned the vents had to fight his way out through the open conning tower hatch against the incoming water. PERCH went down about 100 yards from the survivors shortly before dawn on 3 March 1942, with her colors flying.

4-28. As far as is known, the entire crew was taken aboard by the Japanese destroyers during the morning. Most of the survivors were imprisoned until the end of the war at Makassar, Celebes, although a few were later transferred to various camps in Japan. Fifty-three officers and men are known to have survived to the end of the war.

4-29. In analyzing the many factors involved in the loss of PERCH, it appears that the conning tower and engine room hatch damage was the only reason the boat was unable to submerge upon sighting the enemy destroyers on the morning of 3 March. This case is an excellent illustration of the unhappy fact that but one casualty to a vital part of a submarine can cause its loss.

4-30. However, even had PERCH been able to submerge, it is problematical whether she could have escaped eventually. For example, the extent of external leakage from the oil tanks is not known. This alone might have been sufficient to disclose her exact location to the enemy and in such shallow waters it is likely that she would not again have survived a series of well executed depth charge attacks. Even had the destroyers not discovered PERCH on the morning of 3 March, in the event that repairs could not be made to the damaged hatches it is doubtful that she could have made a surface escape with only one engine, for the Java Sea was at this time completely controlled by the Japanese.