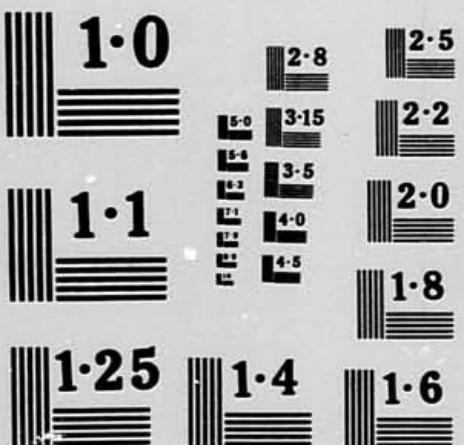


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JOB NO.

H108-AR-89-76

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HISTORY OF USS COD (SS 224)

USS COD (SS 224), a 1,525-ton submarine of the GATO Class of 1940, was built by the Electric Boat Company of Groton, Connecticut. Her keel was laid on 21 July 1942.

USS COD was launched on 21 March 1943 with Mrs. Grace M. Mahoney, wife of a veteran employee of the Electric Boat Company, as the official sponsor.

The submarine was placed in commission on 21 June 1943 and, after the usual fitting out period and shakedown trials, sailed for the Pacific combat area by way of the Panama Canal.

COD arrived at Brisbane, Australia, on 2 October 1943 and after completing exercises and topping off fuel at Darwin, Australia, sailed on her first war patrol under the command of Lieutenant Commander J.C. Dempsey, USN. It was conducted in the northern portion of the South China Sea and extended for 64 days; 45 of which were spent on station and the approaches thereto.

USS COD covered her assigned area in a most thorough manner but through a combination of bad weather and ill fortune was never in a position to cash in on her few fruitless contacts. It was not until she was on her return trip that she finally attained a satisfactory attack position on a worth-while target.

On 29 November 1943, the submarine was on surface patrol across the northern end of Palawan Passage and at 0547 sighted an enemy destroyer at about 10,000 yards range. With sunrise, visibility improved and the hulls of two large ships were distinguished beyond and just ahead of the escort. A short time later, two more ships were sighted well separated from the first two. COD submerged to make approach and at 0557 identified the convoy as one tanker, two cargo ships, one transport, and a destroyer of the MINEKAZE Class.

It was planned to fire four torpedoes at one of the cargo ships and two at the transport and then swing for a stern tube shot at the destroyer when she headed toward the firing point. The first four were fired, but while swinging the periscope for a set-up on the transport, a premature explosion of the first torpedo was heard and it was figured there was no time to complete the set-up. The other two forward tubes were fired immediately at the mainmast of the transport and COD swung right while observing the targets. A hit was observed and heard on the cargo ship between the stack and after king posts and then a second under the stack. The enemy ship took a port list and began to smoke and settle aft.

A few seconds later a splash was observed in the vicinity of the premature explosion and a plane was noted zooming over the spot. A

bomb explosion was heard at about the same time a torpedo hit was seen abaft the stack on the Jap transport.

A few seconds later another bomb explosion was heard and the enemy destroyer was seen closing rapidly. It was assumed that the plane had sighted COD's periscope and the submarine submerged deep. The crackling and groaning sounds of a ship breaking up could be heard through COD's hull and over her sound gear. At 0623, screw noises stopped on the bearing of the transport.

Then came two more explosions; one of which sounded like a torpedo exploding at the end of its run and the other an explosion aboard a target. Two more bombs exploded while COD was going deep and then came the first depth charge. The Jap escort made about three runs, dropping one or two charges on each run, none of which was closer than 400-500 yards. At 0629 the screws of the transport were heard starting up again and judged to be turning at about 80 R.P.M's. The last depth charge a few minutes later and the destroyer was heard drawing away to the northeast.

COD continued on with her patrol but was unable to develop further attacks on the enemy. She arrived in Fremantle, Australia, on 16 December 1943, for refit in preparation for her next patrol.

For her first war patrol, COD was awarded the Submarine Combat Insignia and was credited with sinking a freighter of NAGARA MARU type of 7,149 tons and damaging a transport of NAMINOUE MARU type of 4,731 tons.

Refit was completed on 31 December 1943 and, on 11 January 1944, USS COD sailed on her second war patrol again under the command of Lieutenant Commander J. C. Dempsey, USN. The patrol covered a period of 63 days; 45 of which were spent in enemy areas of the South China Sea, the Molukka Sea, and in the vicinity of Halmahera Island. Five contacts worthy of torpedoes were made and four of these were attacked; two successfully.

While patrolling submerged off Pulo Gambir on 29 January 1944 a northbound enemy convoy consisting of one tanker, two freighters and two or three escorts was sighted close the coast. Though numerous attempts were made to attack, nothing seemed to click and each unsuccessful attempt to gain a suitable firing position seemed to make the next try more difficult. Finally in the early morning of 30 January, a submerged position was made at the estimated dawn position of the convoy, about 3 miles east of Kulao Rai Island, but the enemy group was not sighted again.

On 28 January, due to a loosened cap on a drum of carbon tetrachloride, 90% of the officers and men were sick from the CCL₄ fumes. Since this sickness prevailed all through the sighting and chase of this convoy, COD was not up to her usual combat efficiency and this was in a great measure responsible for the failure to attack the enemy.

The submarine's first attack on this patrol was made from a submerged daylight sighting on 9 February off Tamkwam Point. First, what appeared to be a freighter of about 5,000 tons and a sub-chaser escort were sighted; then later a second ship some six miles ahead of the first. A favorable attack position could not be reached so the target was trailed on the surface. A night attack was made submerged, by periscope, in bright moonlight and a spread of four torpedoes was fired but all missed. At the time of attack, no escort was sighted, so it was assumed this to be the second of the ships sighted during the day.

COD then surfaced and commenced chase of the first. On 10 February at 0129, the bow wave of a submarine was seen dead ahead making high speed. It was assumed to be BILLFISH but since no contact could be made, COD turned away and increased speed. About an hour later BILLFISH was contacted and information given the submarine on the ships COD was chasing. However, the chase was in vain and COD continued on with the patrol.

On 16 February, COD made contact with a power-driven sampan and manning her guns, set the ship on fire and blew it apart with her 4-inch and 20 millimeter guns.

On 23 February 1944, an enemy tanker, a freighter and an accompanying sub-chaser were contacted. They were first sighted at 0524 while on the surface, tracked submerged until 1120, and on the surface until attacked at 2215. A spread of four torpedoes was fired at the larger Jap ship -- the tanker. The first torpedo swerved and prematurely exploded. The second hit the ship under the mainmast and exploded with a flash that lighted the horizon. The third torpedo hit under her stack with a greater flash and broke the ship in half. All parts of the ship burst into flames and it disappeared from sight in about two minutes, accompanied by numerous explosions. The fourth torpedo probably passed astern. Though two tubes were fired at the smaller maru, no hits were observed, as she probably maneuvered to avoid them.

Continuing on patrol, COD made contact with a cargo ship and one escort on 27 February off South Loloda Island. At 0259, approaching on the surface, a spread of four torpedoes was fired. About one minute after firing, the first depth charge explosion was heard. Fifty seconds later the first torpedo hit the after end of the Jap cargo ship with a violent explosion. A large fire immediately broke out with much smoke and a considerable portion of the stern appeared to be blown into the air. The second torpedo hit amidships. Two minutes later a second more violent explosion occurred, after which the flames died out and the target disappeared from view. The escort vessel was heard firing her gun and depth charging the area for 20 minutes after the attack.

Two days later, COD reached a position off the eastern entrance to Buton Strait and, at 1340, heard echo-ranging and closed. At 1409 she sighted the masts and stacks of a cargo ship similar to a YAMAZATO MARU

escorted by what later proved to be a TERUTSUKI type destroyer. The target ship was zigging on a northeasterly course with the escort weaving in position about 1,000 yards ahead. The escort was thought to be a CHIDORI type torpedo boat until the final stages of the approach.

At 1449 COD attempted a fire spread of 4 torpedoes at the freighter. However, due to a defective gyro regulator, the attack was thwarted. Five minutes later the escort ceased echo-ranging and turned toward COD at increased speed, letting go the first barrage of three depth charges right on top of the submarine. Though COD dived deeper and changed course, the TERUTSUKI made another good run and dropped three more which exploded very close, directly overhead. The enemy escort continued intermittent depth charging and echo-ranging until 1648 when she was relieved by one or two different types of anti-submarine ships. These did not trouble COD, however, and she evaded them to surface well out of their range about an hour later. On the surface, batteries were charged, tubes were reloaded, and efforts were continued to repair the gyro setting gear -- while continuing in the general direction of the target. However, at 2400 no possibility was seen for overhauling the Jap ship, so course was changed to normal patrol across the lanes from Buton Strait to Amboin.

On 1 March, after securing loose deck plates and planking and repairing minor damages resulting from the depth charging, COD transmitted a dispatch as to her position and set course for Darwin, Australia. She arrived at Darwin on 4 March and departed for Fremantle the same day; arriving on 13 March 1944.

For her second war patrol, COD was awarded the Submarine Combat Insignia and was credited with sinking 9,853 tons of enemy shipping: the tanker OGURA MARU #3 of 7,350 tons on 23 February; the cargo ship TAISOKU MARU of 2,473 tons on 27 February; and a sampan of 30 tons (by gunfire) on 16 February 1944.

USS COD, after a refit period at Fremantle, left on her third war patrol on 6 April 1944. This patrol, conducted in the Sulu Sea and in the South China Sea off the coast of Luzon, was of 56 days duration; 43 of which were spent on station in combat waters.

During this patrol, COD was only able to get into position for one torpedo attack. This attack, 10 May 1944, was on a convoy of at least 32 ships, including escorts. The convoy was chased and tracked for three and one-half hours and then a submerged periscope attack was made about 20 minutes after sunrise. Just prior to firing, the convoy zigged and gave COD a stern tube set-up on an enemy destroyer. With deliberation, COD waited until the range had opened and then fired three torpedoes at the destroyer, observing two hits. The first torpedo hit right under the bridge. Both stacks collapsed, and dozens of the crew in white uniforms who had been lining the rails acting as periscope lookouts were tossed into the air. The ship immediately started to sag in the middle with bow and stern rising. While swinging around for the set-up on the Maru's, the second torpedo was seen to hit abaft the mainmast and the whole fantail disintegrated.

COD then shifted her set-up to the last ship of the near column. Two torpedoes were fired and, then shifting again, let loose four more at the first ship in the same column. At the time of firing on the second target, two ships in the far column were so aligned as to make for a three-ship target. Since the Jap escorts were closing on COD rapidly, she started deep while tracking the torpedoes by sound.

The first torpedo was heard to hit the first target ship and three hits were heard on the second; followed ripping and tearing noises characteristic of ships breaking up. Some time after firing the last tube, sound reported another torpedo hit which checked with the torpedo run on one of the ships in the far column.

At 300 feet COD changed course to get clear of a nearby CHIDORI which let go a barrage of three depth charges. Breaking up noises of the torpedoed Maru's and the sinking destroyer continued while three aircraft bombs landed close to the sub. At 0605 a series of heavy explosions were heard on the bearing of the torpedoed freighters. One minute later four escorts from the next formation arrived and the depth-charging began and during the following 15 minutes approximately 70 charges were dropped in batches of three to eight. After intermittent periods of silence and more depth charges, COD managed to elude her pursuers, and finally, at 2050, surfaced in the midst of a thunderstorm.

COD proceeded on with her patrol but though several contacts were made she did not get other opportunities for attack. On the 27th of May she entered Lombok Strait enroute to Fremantle and on 1 June entered that port, completing her patrol.

For her third war patrol, USS COD was awarded the Submarine Combat Insignia and was credited with sinking the Japanese destroyer KARUKAYA of 820 tons and the freighter SHOHEI MARU of 7,256 tons. She also damaged a transport of the KASADO MARU type of 6,003 tons and a freighter of 5,423 tons of the BRISBANE MARU type. Out of nine torpedoes fired COD had obtained seven hits.

COD left on her fourth patrol on 3 July 1944 under a new skipper--Commander J. A. Adkins, USN. This patrol, ending on 25 August 1944, was of 54 days duration; 36 of which were spent in combat areas. It was conducted in two phases. The first was off Manila and following a reload at Darwin, another short phase was made in the Flores and Molukka Seas.

Ten aggressive torpedo attacks and one gun attack were made on enemy shipping. Out of the first load of torpedoes only one hit was made and poor torpedo performance was thought to have accounted for some of the misses. However, out of 24 torpedoes loaded at Darwin, 11 hits were made.

On 16 July 1944 the first attack was made, while submerged during daylight, on a convoy consisting of three unescorted Jap ships. Three torpedoes were fired at each of two cargo ships but both targets maneuvered and avoided them. Four torpedoes fired a few minutes later at an escort vessel also missed.

In the darkness of early morning of the next day, COD made an end around on the same convoy. In a surface attack from an excellent position, three torpedoes were fired. For some unknown reason, all three missed and the only result was a counterattack by the escorting vessels.

Late the same day, radar contact was made with seven ships consisting of two large ships and five smaller ones. Six torpedoes were fired at difficult angles. One timed hit was heard, possibly on a trailing escort.

At 0445 on the morning of 20 July 1944, COD made a radar contact on a convoy of four cargo ships and five escorts. Visibility was less than 1,000 yards in the heavy rain and dark overhanging clouds. Intermittent flashes of lighting revealed brief glimpses of a cargo vessel. Four stern torpedoes were fired with no hits observed.

Another night attack on 25 July resulted from radar contact with a convoy of three cargo ships and four escorts. One timed hit was scored on a cargo ship believed to be of the MAREI MARU type. The ship turned on a vigorously flashing red mast-head light and commenced flashing signals with an escort vessel. The target ship was later tracked at one half a knot and the radar pip grew smaller in size.

A cargo or passenger ship with one escort was picked up by COD's radar at 0225 on 3 August 1944. Three torpedo hits were heard two of which were observed. Screw noises stopped and breaking-up noises were heard for three minutes after the ship was hit. Upon surfacing at the scene of the torpedoing, much debris and a heavy oil slick were observed. Ten to fifteen survivors were seen near a small life boat.

A daylight approach was made on a small cargo ship or naval auxiliary on 10 August 1944. Four torpedoes reached out from the submarine toward the target; three of them were seen to hit. The target disappeared in a cloud of smoke and never came into view again. Upon surfacing, in the midst of a large oil slick and debris, COD picked up the lone survivor.

Later that day an unidentified enemy ship was picked up and four torpedoes were launched. One hit was observed and the target ship appeared well down by the bow and making a large bow wave. COD regained position for another attack on the following day. Four torpedoes were fired at the crippled ship. One hit on the ship was heard and seen and the screws stopped. The target was observed to sink through the periscope.

On 14 August 1944, a large landing barge was attacked by gunfire from COD. When the shells failed to sink the ship, four torpedoes were fired. Three hits were observed and the Japanese ship went down.

The last attack of the war patrol came on 18 August. It was a night attack on an unidentified ship. However, no torpedo hits were scored and this was the last opportunity the submarine had during the

fourth war patrol. After fifty-four days on her war patrol COD arrived at Fremantle, Western Australia on 25 August for a normal refit period.

The submarine departed on her fifth war patrol on 18 September 1944 which was conducted in the areas west of Luzon and Mindoro. Her first attack was made on a convoy of one large tanker, one freighter, two smaller vessels and a WAKATAKE class destroyer escort. Singling out the two largest targets, COD fired four torpedoes at the tanker and two at the freighter. Two hits were observed on the tanker and one hit was probably made on the freighter. Observation was interrupted by an aggressive attack by the escort vessel which kept COD submerged for a short while.

On coming back to periscope depth, COD noticed that the convoy was still in the vicinity and approached for another attack. The damaged tanker was selected again and four torpedoes were sent on their way. All four torpedoes ripped into the tanker and she disappeared.

Two days later, a night attack was made on another large tanker which had already been damaged by a torpedo from the submarine RAY. Four torpedoes were fired and two timed hits were made; these hits were observed by USS RAY. This attack brought an aggressive anti-submarine hunt by the escort vessels.

COD surfaced about daybreak and noted that the tanker had suffered severe damage but had not sunk. The submarine set chase for the tanker but could not gain a firing position before the tanker reached the safety of shallow water.

On 8 October, COD made an approach on a Japanese minelayer at periscope depth. Upon gaining position, she fired a spread of six torpedoes. The enemy spotted the torpedo wakes and made successful evasive maneuvers. Turning toward the submarine to counter-attack, the minelayer forced COD to go deep to avoid the depth charges which followed.

On 22 October, COD sighted five enemy sea trucks and made an attack on them with gun fire. Several hits were scored on one of the trucks before they could escape to safety by running into shallow water.

A night surface attack was made on a convoy of four large ships on 25 October. The convoy was heavily escorted by five anti-submarine vessels. The largest of the ships, an ASAMA MARU class transport, was selected as the target and the last four torpedoes were fired after this fast-moving target from the best position obtainable. Unfortunately, all torpedoes missed even though the firing problem had checked perfectly. The keen disappointment over missing this target was felt throughout the submarine and it was determined that COD would track this convoy until it could be turned over to another submarine.

Although out of torpedoes herself, COD tracked this important convoy for about thirty hours. The thought of the American and allied soldiers that might be killed by the enemy troops and equipment in the ASAMA MARU transport spurred the COD on to follow the convoy and report its positions.

A rendezvous was made with the submarine BREAM on 29 October and six Japanese soldiers were transferred to COD. They had been picked up out of the water by BREAM after their transport had been sunk from under them. The prisoners of war were covered with ulcerated wounds, jungle sores and chancres.

During this war patrol, COD arrived on lifeguard duties off the northeast coast of Luzon during the carrier strikes in the vicinity of Manila Bay. Upon completion of her fifth war patrol, COD pulled into Pearl Harbor on 20 November 1944, on her way to the Navy Yard at Mare Island, California, for an overhaul.

On 1 December, COD arrived at Mare Island and by 20 February 1945, her yard overhaul was completed. Leaving San Francisco, the submarine arrived at San Diego on 22 February, where she gave daily services to the West Coast Sound School until her departure for Pearl Harbor on 28 February. COD entered the channel at Pearl Harbor on 7 March where she received voyage repairs and training.

The sixth war patrol of the submarine COD started with her departure from Pearl Harbor on 24 March 1945. COL and the submarine POMPON departed from Guam together on 9 April to conduct coordinated patrol and lifeguard operations for the 5th Air Force in the East China Sea. This patrol was under the command of Commander J. A. Adkins, USN. The submarines POMPON and COD operated as a coordinated attack group with the Commander Adkins as task group commander.

In the late morning of 17 April 1945, two ships were sighted and COD approached them on the surface to engage them with gunfire. Upon surfacing it was apparent that one of the vessels was towing the other. The tow was set on fire with 5-inch and 40 millimeter shells. The tow obviously had a cargo of oil as large clouds of black smoke poured out and flames engulfed the vessel. The armed tug let go his tow at this point and decided to shoot it out.

The tug was taken under fire at a range of 3,700 yards and as she drew closer she was sunk by the gunfire of COD's 5-inch and 40 millimeter shells. COD then returned to the burning oiler and sank it with three five-inch hits along the waterline. Three prisoners were picked up from the water.

On the evening of 24 April, the submarine made radar contact on two ships. Gaining a firing position, COD fired four torpedoes at the lead ship. Each torpedo jumped out of the water as soon as it was launched and then proceeded toward the target like a porpoise, alternately broaching and plunging. The trailing ship was not fired upon

considering the performance of the torpedoes and the target ship detected the submarine and gave chase. The increasing accuracy of the enemy's gunfire forced COD to submerge and endure a severe depth charging.

The submariners in COD showed their mettle on 26 April when a torpedo casualty and fire occurred in the after torpedo room. The crew worked heroically as the fire blazed with increasing intensity and threatened to explode the warhead in the torpedo which caused the trouble. Working in intense heat and smoke, the men rigged jiggers to the torpedo, which was too hot to touch, and held their thumbs over the hydrogen burner hole in the torpedo tube door during the time when the torpedo was fired. The captain off the ship was deeply impressed by the sterling quality of his men and said, "It is a privilege to have been their shipmate."

During this time it was necessary for two men to go aft to assist in opening the after torpedo room hatch from topsides. Two of the men were washed over the side, one of whom was recovered some time later in a state of complete exhaustion. An intensive search for the other man was unsuccessful. A Navy patrol plane assisted in the search for an extended period in spite of the foul weather which was considered by the skipper of COD to be non-flying weather. He was greatly impressed by the willing risk and dilligence displayed by these flyers in helping search for the lost man.

Many floating mines were sighted during this war patrol and 11 of them were sunk by gunfire from the sub. Patrol and lifeguard duty was also included in the COD's schedule before she arrived at Guam on 29 May 1945.

After a normal refit period, COD departed from Apra Harbor, Guam on her seventh war patrol on 26 June 1945. This patrol was conducted partly in lifeguard duties off the Indo-China Coast and partly on offensive patrol in the Gulf of Siam. On 9 and 10 July, COD was skillfully maneuvered for 14 hours in close proximity to the grounded Dutch submarine O-19 in a vain effort to tow her clear of Ladd Reef. The crew of the Dutch submarine was finally transferred to COD and the O-19 was completely destroyed by demolition charges, torpedoes and gunfire.

On 1st July, COD made an unsuccessful attack on a small convoy. The smooth sea coupled with air cover, forced the submarine to approach submerged and just prior to firing, the sub was bombed or depth charged. Three torpedoes were fired on sound bearings but no hits were scored. The Jap counter attack was not too close.

That night an end around was made on the same convoy to gain a position ahead. However, on commencing an approach, the radar power supply burned out. The only choice left was to attempt another daylight attack. No further contact with the convoy could be made.

During the period between 21 July and 1 August, COD made twenty gun attacks on twenty-three junks and motor sampans, plus one towed oil barge, sinking all of them for a total of 2,200 tons sunk. During these attacks 65 rounds of five-inch ammunition and 1,092 rounds of 40 millimeter ammunition were expended. COD was one of the first ships to attempt to break up the considerable amount of small boat traffic in the Gulf of Siam which was transporting valuable enemy cargo in small lots to and from Singapore. The cargoes consisted of rice, sugar, oil, soap, crude rubber, coffee, paper, horseshoes and army blankets. The sub's skipper inspected these vessels to determine the nature of the cargoes and provide for the safety of friendly natives.

On 1 August, COD was forced to dive while being strafed by an enemy fighter plane, leaving her boarding party unassisted on an enemy ship. Fortunately the boarding party was rescued by the submarine BLENNY after 48 hours. They were in good health and suffered no ill effects from their junk cruise.

The seventh war patrol was successfully ended as COD pulled into Fremantle Harbor, Western Australia on 13 August 1945. This completed the submarine's last war patrol in World War II since the cessation of hostilities followed, shortly thereafter. COD subsequently returned to the United States, where she was placed out of commission in reserve in the New London Group, Atlantic Reserve Fleet.

USS COD (SS 224) earned the Submarine Combat Insignia for each of her seven war patrols and is entitled to wear seven Battle Stars on the Asiatic-Pacific Area Service Medal for her service in World War II. She participated in the Okinawa Gunto Operation from 14 April to 25 May 1945.

COMMANDING OFFICERS

Commander J. C. Dempsey, USN, War Patrols 1, 2, and 3.

Commander J. A. Adkins, USN, War Patrols 4, 5, and 6.

Lieutenant Commander E. M. Westbrook, Jr., USN, War Patrol 7.

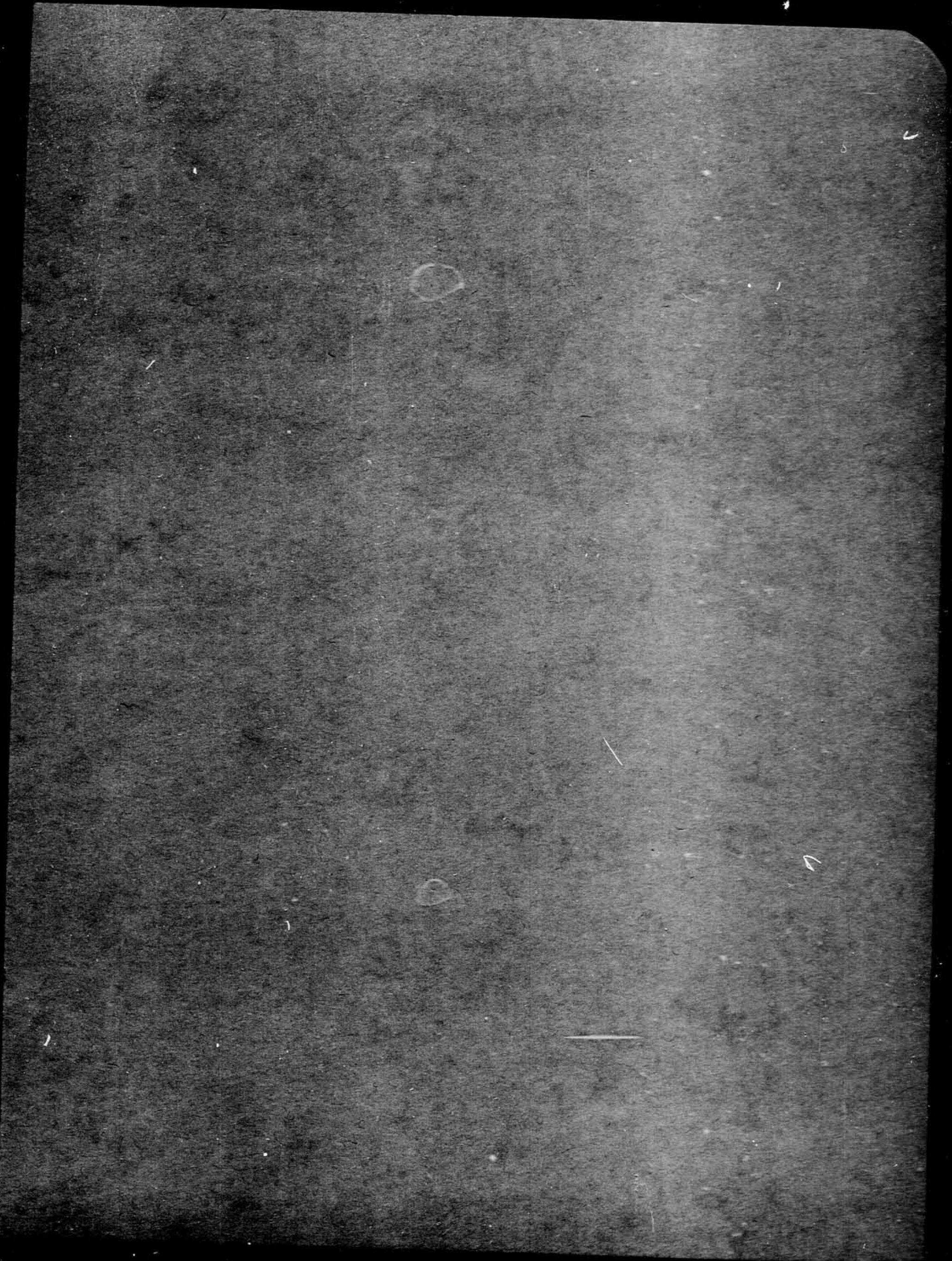
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STATISTICS

OVERALL LENGTH	312 feet
BEAM	27 feet
SURFACE SPEED	20 knots
DISPLACEMENT	1,525 tons.

* * * * *

Compiled September 1951



SS224/A16-3
(021)

U.S.S. COD (SS224)
c/o Fleet Post Office,
San Francisco, California

DECLASSIFIED
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From: The Commanding Officer.
To: The Commander in Chief, United States Fleet.
Via: (Official Channels).

Subject: U.S.S. COD (SS224), Report of War Patrol
Number One.

Enclosure: (A) Subject Report.

1. Enclosure (A) covering the first war patrol of this vessel conducted in the northern portion of the South China Sea during the period 14 October 1943 to 16 December 1943 is forwarded herewith.

J. C. DeMossy
J. C. DeMossy

DECLASSIFIED

DECLASSIFIED-ART. 0445, OPNAVINST 5510.1C
BY O P - 0989 C DATE 5/25/72

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(B) NARRATIVE

22 October 1943

1002 (KL) Completed exercises and proceeded to Banda Sea via passage to east of Lakor Island. Radar and sight contact with various RAAF planes during day.
Noon: Lat. 12-07.8 S.; Long. 130-03 E.
Fuel used 585; Miles 53.

23 October 1943

0544 (K) Submerged 4 miles south of Lakor Island to make submerged passage between Lakor Island and Meati Miarang reef. Exercised crew at battle stations.
1438 (K) Sighted type "Ruth" plane, on easterly course, distant 2 miles, altitude about 300 feet.
(A/C contact No. 1).
2003 (K) Surfaced. Set course to pass thru points crossed by traffic lanes southwest and northwest of Buru Island.
Noon: Lat. 08-08.1 S.; Long. 128-16 E.
Fuel used 3835; Miles 289.

24 October 1943

Transiting Banda and Molukka Seas.
0938 (K) Submerged for trim and training. Remained submerged to complete repairs to steering gear and trim pump.
1212 (K) Surfaced.
1438 (K) While on course 325 (T) sighted tops of ship (Ship contact No. 1) bearing 294 (T), distant about 10 miles, on approximate course 070 (T). Ship popped into view suddenly thru a hazy horizon. Changed course to 120 (T) opening out to prevent being sighted, then to 060 (T) to gain position ahead. Own position Lat. 04-40 S.; Long. 126-00 E.
1500 (K) Lost sight of masts and changed course to 000 (T) at maximum speed to regain contact.
1515 (K) Changed course to 290 (T) to run down bearing, not having regained contact.
1547 (K) Changed course to 250 (T) on theory that we had been sighted and enemy had reversed course.
1600 (K) SD radar plane contact 21 miles closing to 18 miles (A/C contact No. 2). Plane not sighted. Continued on course 250 (T) at maximum speed.

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24 October 1943 (Cont.)

1625 (K) SD radar plane contact 10 miles (A/C contact No. 3). Sky overcast and plane not sighted. Submerged when contact closed rapidly to 4 miles. Since position, course and speed of target was unknown, decided to continue submerged patrol across this traffic lane. The only distinguishable features of ship were two masts and one funnel amidships. Foremast appeared to have an unusually large lookout bucket.

1901 (K) Surfaced and continued across traffic lanes to southwest of Buru Island.
Noon: Lat. 05-10 S.; Long. 126-23.4 E.
Fuel used 2170; Miles 215.

25 October 1943

Enroute area via Molukka Sea, Ceram Sea and Molukka Passage. Overcast.

0905 (K) Sighted possible periscope 20 miles east of Lifumatola. Due to pass Cabrilla in Molukka Passage.

1110 (K) SD radar plane contact at 23 miles which closed to 18 and faded out at 26 miles, at 1115 (K). (A/C contact No. 4).

1131 (K) Sighted Japanese type "MAVIS" flying boat on southerly course distant about 7 miles very low, (A/C contact No. 5). SD did not make contact. Submerged.

1609 (K) Surfaced.
Noon: Lat. 01-16 S.; Long. 126-39.3 E.
Fuel used 3415; Miles 305.

26 October 1943

Enroute Banka Passage.

0450 (H) Sighted Banka Island distant 16 miles.

0520 (H) SD radar plane contact 16 miles closing to 10 miles (A/C contact No. 6). Overcast did not sight plane.

0526 (H) Submerged enroute Banka Passage. Encountered strong easterly set. Decided to continue north and pass thru Siaoe Passage to exploit traffic lanes that vicinity. Heavy rain squalls during day.

1919 (H) At eastern entrance to Siaoe Passage SJ radar made contact at 1300 yards. Sighted nothing. Put contact astern until it disappeared at 1400 yards. Came about and at 1938 (H) made SJ contact at 1200 yards in approximately the same position. Could sight nothing

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26 October 1943 (Cont.)

(visibility about 5000 yards). Pip was sharp and resembled that made by a small buoy.

Continued thru Siaoe Passage.

Noon: Lat. 01-59 N.; Long. 125-49.5 E.

Fuel used 2315; Miles 215.

27 October 1943

Enroute Siaoe Passage to Sibutu Passage.

1716 (H) During period 1716-1728 (H) passed 6 Japanese oil drums in Lat. 03-43 N.; Long. 121-37 E.

1837 (E) Submerged for trim and training.

1905 (H) Surfaced.

1923 (H) Observed radar interference which persisted until 2200 (H) presumed to be Cisco, due to pass in this vicinity.

Noon: Lat. 03-37.4 N.; Long. 122-05.0 E.

Fuel used 3255; Miles 273.

28 October 1943

Enroute Sibutu Passage to Balabac Strait.

0607 (H) Sighted sail of native vinta on southeasterly course, distant about 10 miles.

1332 (H) With Bancoran Island distant about 10 miles, submerged.

1838 (H) Surfaced.

Noon: Lat. 07-38.7 N.; Long. 119-04 E.

Fuel used 4275; Miles 307.

29 October 1943

0109 (H) Commenced transit Balabac Strait via Nasubata Channel.

0524 (H) Submerged for patrol off western entrance to Balabac Strait.

1742 (H) Surfaced and proceeded to area via Palawan Passage.

2018 (H) Radar interference on SJ screen at regular intervals of 25 seconds, duration of pulses 3-5 seconds. This interference lasted until 0400 (H) 30 October.

Noon: Lat. 07-39.2 N.; Long. 116-41.3 E.

Fuel used 1960; Miles 158.

30 October 1943

Enroute area via Palawan Passage.

1435 (H) Changed course to head for position southeast of Macclesfield Bank intending to exploit traffic lanes that vicinity for several days.

CONFIDENTIAL

30 October 1943 (Cont.)
1618 (H) Submerged for training and routine of
torpedoes.

1840 (H) Surfaced.
Noon: Lat. 11-26 N.; Long. 118-09.2 E.
Fuel used 2800; Miles 262.

31 October 1943
Surface patrol across traffic lanes south-
east of Macclesfield Bank.

1729 (H) Submerged for trim and training.

1803 (H) Surfaced.
Noon: Lat. 15-28 N.; Long. 115-15.7 E.
Fuel used 3485; Miles 271.

1 November 1943
Surface patrol across traffic lanes south-
east and east of Macclesfield Bank. Over-
cast with passing rain squalls.
Noon: Lat. 15-42.7 N.; Long. 115-31 E.
Fuel used 795; Miles 69.

2 November 1943
Surface patrol across traffic lanes north-
east and east of Macclesfield Bank. Over-
cast, rain squalls and poor visibility.
1548 (H) Submerged to repair SJ radar. Ranging unit
out of commission. Not feasible to accom-
plish repair on surface due sea conditions.

1942 (H) Completed repairs and surfaced, set course
to pass south of Macclesfield Bank enroute
Indo-China coast.
Noon: Lat. 17-02 N.; Long. 115-24.5 E.
Fuel used 625; Miles 91.

3 November 1943
Surface patrol across traffic lanes east
and southeast Macclesfield Bank, enroute
Indo-China coast.

1711 (H) Submerged for trim and training.

1829 (H) Surfaced.
Noon: Lat. 15-05.5 N.; Long. 115-24 E.
Fuel used 1175; Miles 145.

4 November 1943
Surface patrol across traffic lanes south
and west of Macclesfield Bank enroute Indo-
China coast.
1718 (H) Submerged for training and routine of tar-
pedoes.

CONFIDENTIAL

4 November 1943 (Cont.)

1846 (H) Surfaced and proceeded to patrol station between Cape Batangan and Kulao Rai.

2100 (H) Because of proximity to coast, decided patrol one day submerged near Cape Batangan before investigating possible enemy activity vicinity Macclesfield Bank.

Noon: Lat. 14-53 N.; Long. 111-58 E.

Fuel used 1535; Miles 207.

5 November 1943

Surface patrol across traffic lanes enroute station between Cape Batangan and Kulao Rai. Experienced poor visibility upon approaching coast. Due to stronger southerly set than allowed for, did not make landfall on Kulao Rai as planned.

0555 (H) Submerged when soundings showed 40 fathoms.

0621 (H) Sighted Kulao Rai bearing 327 (T), distant about 20 miles. Due to southerly set and uncertainty in regard to ship's position, did not get in proper patrol position until afternoon. Visibility fair to good during day.

1853 (H) Surfaced and commenced patrol across traffic lanes enroute Macclesfield Bank.

Noon: Lat. 15-08.5 N.; Long. 109-09 E.

Fuel used 1160; Miles 168.

6 November 1943

Surface patrol across traffic lanes enroute station southeast Macclesfield Bank. Visibility excellent during night, and variable with intermittent rain squalls during day.

1700 (H) Submerged for drills.

1809 (H) Surfaced and patrolled traffic lanes southeast of Macclesfield Bank.

Noon: Lat. 14-40.5 N.; Long. 112-52.8 E.

Fuel used 2380; Miles 236.

7 November 1943

Surface patrol southeast of Macclesfield Bank. Visibility unlimited.

1710 (H) Visibility decreased due rain squalls and cloudiness. Shifted patrol to area northeast of Macclesfield Bank.

Noon: Lat. 14-35 N.; Long. 115-33 E.

Fuel used 1155; Miles 170.

CONFIDENTIAL

8 November 1943

- Surface patrol enroute station northeast of Macclesfield Bank.
- 0405 (H) Heard series of 12 explosions bearing ahead, estimated distance 6-7 miles.
- 0413 (H) Sighted flashing light bearing 023 (T) on horizon. Closed this bearing.
- 0508 (H) Radar contact bearing 043 (T) range 7000 yards. Sighted nothing. Radar reported 2 small pips at ranges 6000 and 5700 yards. Turned towards, manned sound gear and slowed to develop contact.
- 0513 (H) Sound reported fast light screws bearing 050 (T). Radar range 5000 yards on this bearing, other small pip disappeared.
- 0514 (H) Sighted outline of large ship bearing 040 (T), range 6500 and apparently stopped. Radar and sound reported range on nearest pip (light fast screws) closing rapidly on bearing 050 (T). Had ~~made contact with southbound convoy~~, one or possibly two escorts (not visible) were on a southerly course while only large ship visible appeared to be stopped. Visibility improving rapidly, except in the northeast which was covered with a rain cloud. At
- 0519 (H) Submerged and changed course to open distance from track, when range to nearest escort decreased to about 4000 yards. Sighted nothing thru periscope.
- 0528 (H) On sounds report of same light fast screws on constant bearing speeding up and closing rapidly, went to 150 feet, figuring that I had been sighted while submerging. At
- 0530 (H) Returning to periscope depth, sound bearings indicating escort had reversed course.
- 0531 (H) Sound reported two torpedoes on bearing 040 (T). Started to 160 feet. At 0532 (H), heard torpedo explosion and sounds of ship breaking up. Started return to periscope depth which required considerable time because of water taken in to get thru negative gradient at 140 feet.
- 0554 (H) Echo ranging bearing 054 (T), estimated range 6000 yards.
- 0556 (H) Sighted burning tanker (Ship contact No. 2) bearing 054 (T), range about 5000 yards. Details not discernible since ship was a mass of flames.

CONFIDENTIAL

8 November 1943 (Cont.)

- 0600 (H) Echo ranging (4 second intervals) in vicinity torpedoed ship. Escort not visible.
- 0605 (H) Slow speed screws bearing 056 (T), which sounded like submarine screws.
- 0618 (H) Sighted escort (Chidori class) (Ship contact No. 3) bearing 057 (T) range about 9000 yards on northerly course, signalling to burning tanker. Escort then disappeared to northward.
- 0625 (H) Assumed friendly submarine had attacked convoy, so opened out to westward to surface and chase remaining ships.
- 0653 (H) Heard series of 4 explosions after which periscope observation revealed that tanker had blown up.
- 0712 (H) Sighted escort bearing 074 (T), range 9000 yards on southerly course, echo-ranging at 8 second intervals. At
- 0815 (H) Changed course to north. At
- 0835 (H) Masts of escort disappeared to southeast, echo-ranging at 8 second intervals.
- 0859 (H) While preparing to surface, echo-ranging heard on easterly bearing and shortly thereafter sighted escort bearing 094 (T), range 10,000 yards, zig-zagging on various courses at various speeds from 2 to 18 knots. Escort remained in vicinity our position at ranges 2000-14,000 yards. Because of widely diverging courses and speeds, no decent opportunity for attack was afforded. At
- 1130 (H) Went under gradient at 150 feet and opened for an hour and a half, on northerly course. At 1350 (H) could not sight escort, but heard occasional echo-ranging which faded out on easterly bearing.
- 1721 (H) Sighted same or similar type escort bearing 322 (T), which passed on a southwesterly course at range of 8000 yards. At 1752 (H) escort changed to southeasterly course and drew out of visible range.
- 1824 (H) Surfaced and searched along course 330 (T) for 40 miles, since that was direction from which escort was last seen approaching.
- 2113 (H) Altered course to patrol traffic lanes between Macclesfield Bank and the Paracels.

Noon: Lat. 16-57.3 N.; Long. 115-59.2 E.
Fuel used 1970; Miles 211.

CONFIDENTIAL

9 November 1943

Surface patrol across traffic lanes between Macclesfield Bank and Paracels enroute position 18 N.; 110 E.; where planned to patrol submerged for one day.

0954 (H) Radar aircraft contact at 21 miles (A/C contact No. 7).

0956 (H) Submerged when contact closed rapidly to 14 miles. Plane not sighted. Maintained constant periscope watch while repairing SJ radar, which functioned erratically during yesterday's contact. Completed repairs at

1257 (H) Surfaced. Unlimited visibility during day and night.

Noon: Lat. 17-38 N.; Long. 122-55 E.
Fuel used 1970; Miles 211.

10 November 1943

0621 (H) Submerged off southeastern coast Hainan.

1834 (H) Surfaced and proceeded to position off Cape Tourane.

Noon: Lat. 18-03 N.; Long. 109-49.3 E.
Fuel used 1125; Miles 199.

11 November 1943

0434 (H) Sighted 3 small fishing craft lying-to in vicinity, lat. 16-41 N.; long. 108-45 E.
(Ship contact No. 4).

0507 (H) Made radar and sight contact bearing 196 (T), range 7500 yards. Closed and identified as small lugger, either fishing or A/S vessel on course 345 (T) at 6 knots.
(Ship contact No. 5).

0516 (H) Submerged when range decreased to 5000 yards. Due to excellent visibility it was impossible to avoid being sighted on the surface. At 0530 (H) observed craft sighted to be showing a bright white light similar to kerosene flare. Remained vicinity but nothing else sighted. Light extinguished after about 30 seconds and lugger proceeded on course 345 (T). Continued submerged patrol off Cape Tourane.

1853 (H) Surfaced and proceeded vicinity Kulao Rai.
Full moon.

Noon: Lat. 16-21.4 N.; Long. 108-35 E.
Fuel used 915; Miles 127.

CONFIDENTIAL

12 November 1943

0604 (H) Submerged. Tried to maintain position between Kulao Rai and Cape Batangan but experienced 3 knot current setting 160 (T).

1849 (H) Surfaced.

Noon: Lat. 14-58 N.; Long. 109-10 E.
Fuel used 695; Miles 116.

13 November 1943

Surface patrol enroute position between Cape Tourane and Kulao Cham.

0615 (H) Submerged. Heavy seas and rain squalls.

1846 (H) Surfaced. Experienced 2 knot current setting 145 (T).

Noon: Lat. 16-05 N.; Long. 108-35 E.
Fuel used 1710; Miles 108.

14 November 1943

Surface patrol along track from Cape Tourane to Haiphong.

0629 (H) Submerged.

1850 (H) Surfaced and patrolled across traffic lanes approaching Haiphong from the south.

Noon: Lat. 17-36.8 N.; Long. 107-44.4 E.
Fuel used 1205; Miles 136.

15 November 1943

0621 (H) Submerged and patrolled across traffic lanes approaching Haiphong from south and southeast.

1840 (H) Surfaced and proceeded to position on line between Haiphong and Hainan Strait.

Noon: Lat. 19-39 N.; Long. 107-35 E.
Fuel used 975; Miles 141.

16 November 1943

Surface patrol across traffic lanes between Haiphong and Hainan Strait.

0626 (H) Submerged.

1852 (H) Surfaced.

Noon: Lat. 20-17.3 N.; Long. 108-26.5 E.
Fuel used 360; Miles 95.2

17 November 1943

Surface patrol across traffic lanes between Haiphong and Hainan Strait.

0634 (H) Submerged.

1843 (H) Surfaced and patrolled across same traffic lanes until 2230 (H) when set course to patrol across lanes approaching Haiphong from the south.

Noon: Lat. 20-17.5 N.; Long. 108-17.5 E.
Fuel used 420; Miles 100.

CONFIDENTIAL

18 November 1943

0627 (H) Submerged. During day seas and wind made up with indications of approaching typhoon.

1850 (H) Surfaced in heavy seas and set course south to patrol off Cape Tourane.

Noon: Lat. 18-32 N.; Long. 107-16 E.

Fuel used 665; Miles 116.

19 November 1943

Surface patrol enroute position off Cape Tourane, very heavy seas and intermittent rain.

0211 (H) SJ radar contact at 6500 yards, bearing 126 (T), at 2-3 knots on westerly course, at

0215 (H) in fair moonlight visibility, sighted small craft (Ship contact #6) (fishing or A/S) at range of 3500 yards. Ascertained small craft was not escorting, so increased speed and avoided. Continued along route to Cape Tourane and during daylight conducted surface patrol 20-30 miles off-shore. Very heavy seas and wind. Since periscope patrol impossible and torpedo performance limited in these seas, decided patrol across traffic lanes southeast of Paracels, in hopes of obtaining more favorable conditions.

Noon: Lat. 16-51 N.; Long. 108-00 E.

Fuel used 1840; Miles 197.

20 November 1943

Surface patrol across traffic lanes north and northeast of Kulao Hai. Heavy seas, wind and rain continued.

0445 (H) Radar contact bearing 183 (T), range 12,000 yards, (Ship contact No. 7). Radar tracked until 0620 and determined enemy consisted of one and possibly two large ships on course 055 (T), speed 6 knots with escort apparently patrolling on courses 000 (T) to 070 (T), 3000-4000 yards on western flank of convoy.

0620 (H) Convoy changed course to 005 (T), so endeavored to open range to northwestward. Escort at range of 10,000 yards, but not visible because of rain and overcast. Seas limited speed to 8 knots on northerly heading, and rendered any form of successful attack improbable, but figured if I could stay unseen ahead of convoy, conditions might improve. At

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20 November 1943 (Cont.)

0650 (H) Lost radar contact at 14,800 yards and slowed to 4 knots. At 0714 (H), not having regained contact, changed course to north and at 0755 (H), to 055 (T) in unsuccessful attempt to regain contact. At 0900 (H), rains became intermittent with visibility, at times, increasing to 8000 yards. At 1310 (H) Changed course to 085 (T) on theory that convoy may have headed thru Paracel Reefs. At 1733 (H) Changed course to 350 (T) to ride out storm which had steadily increased in severity, and to maintain distance off Reefs. Planned to intercept convoy north of Paracel Reefs.
Noon: Lat. 16-27.6 N.; Long. 110-21.5 E.
Fuel used 1785; Miles 171.2

21 November 1943

Surface patrol west of Paracel Reef on northerly course riding out storm.
0658 (H) Changed course to eastward to patrol north of Reefs, wind decreasing, visibility improving, but seas still high.
0927 (H) Radar aircraft contact at 13 miles which closed to 9 and then opened to 13 miles when it disappeared. Overcast - plane not sighted. (A/C contact No. 8).
1225 (H) Obtained navigational fix which placed us 55 miles bearing 203 (T) from D.R. position. Altered course to pass north of Paracel Reefs.
2043 (H) In compliance instructions CTF 71, transmitted information relative number torpedoes on board.
Noon: Lat. 17-06 N.; Long. 111-15 E.
Fuel used 1865; Miles 158.

22 November 1943

Surface patrol north of Paracels. Storm subsiding. Overcast, intermittent rains and high seas. During day conducted surface patrol across traffic lanes between Paracels and Macclesfield Bank.
2000 (H) Changed course to 290 (T) to intercept Hong Kong - Kulao Rai traffic.
Noon: Lat. 17-51.7 N.; Long. 113-12 E.
Fuel used 1595; Miles 141.

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23 November 1943

Surface patrol across line between Hong Kong and Paracels. Overcast, high seas with variable visibility.

- 1050 (H) Sighted masts of ship bearing 301 (T) range about 12,000 yards, which suddenly appeared out of a rain cloud. Radar made contact at range of 18,000 yards on approximately same bearing as ship sighted. Opened range to prevent being seen by escort ship, which the SJ radar could not pick up and at
- 1105 (H) Sighted masts of 3 large ships on course 080 (T), in approximate line of bearing 020 (T). Escort ship (800-1000 tons) which had appearance of small freighter with single stack and two stick masts, was on flank of convoy and about 4000 yards distant from it. (Ship contact No. 8). Tracked convoy by radar and at 1152 (H) determined course to be 050 (T), speed 6.5 knots. In the visibility prevailing, the escort ship would appear and disappear from sight while the larger ships were sighted but few times. At
- 1210 (H) Visibility improved momentarily and escort ship was sighted very plainly. Convoy from appearance of masts and radar range were maintaining course 050 (T). Opened range and increased speed to take position ahead for submerged attack. Post analysis shows that we were probably sighted at this time and convoy's course changed. At
- 1600 (H) Slowed upon attaining position estimated to be dead ahead of convoy at range of 12 miles, and ran down estimated track.
- 1714 (H) Commenced search for convoy at maximum speed. About 14 knots, due to seas.
- 2053 (H) While on course 240 (T), SJ radar contact (very small pip) bearing 270 (T), (Ship contact No. 9) range 7700 yards. (This position agreed very closely with that which should have been attained by the convoy had it employed Japanese evasive tactics as outlined in Intelligence Bulletins.) Assumed contact made with convoy escort since pip was comparable to that obtained for 500-600 ton ships and contact could not be seen at range of 5000 yards. Tracked this ship on course 070 (T), speed 6 knots, then searched for

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23 November 1943 (Cont.)

convoy within radius of 15 miles of escort without success. Maintained contact in hopes that this might be escort about to meet convoy, until

2330 (H) when I could continue trailing (high seas precluded proper depth setting for torpedo attack) or proceed immediately to arrive at daylight position of possible enemy activity northwest of the Paracels. Since this course would also traverse possible positions of convoy previously sighted, at

2335 (H) proceeded along course 220 (T) enroute position northwest of Paracels.

Noon: Lat. 18-13 N.; Long. 112-56 E.

Fuel used 810; Miles 100.

24 November 1943

0618 (H) Submerged for trim.

0650 (H) Surfaced.

1018 (H) Radar aircraft contact at 9 miles (A/C contact No. 9). Submerged when contact closed to 6 miles, overcast and plane not sighted. Being in desired position decided to patrol submerged for 3-4 hours to avoid detection by aircraft. Maintained constant periscope watch but sighted nothing, so at

1314 (H) Surfaced and continued search for enemy traffic along track to Kulao Rai.

Noon: Lat. 17-33.5 N.; Long. 111-08.5 E.

Fuel used 3030; Miles 249.

25 November 1943

0602 (H) Submerged 10 miles south of Kulao Rai and patrolled 4-8 miles off beach during day. Visibility fair.

1957 (H) Surfaced and proceeded eastward across area on course to pass south of the Paracels.

Noon: Lat. 14-54.5 N.; Long. 109-05.6 E.

Fuel used 1210; Miles 203.

26 November 1943

Surface patrol across traffic lanes passing between Paracels and Macclesfield Bank.

2301 (H) Transmitted serial one reporting position, lack of results, and fuel available to reach Exmouth Gulf at one engine speed.

Noon: Lat. 14-12.5 N.; Long. 111-27 E.

Fuel used 1300; Miles 125.4

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27 November 1943

Surface patrol enroute Palawan Passage passing south of Macclesfield Bank.

1730 (H) Submerged for trim and training.

1804 (H) Sur faced.

Noon: Lat. 13-38.7 N.; Long. 114-47.4 E.
Fuel used 1680; Miles 182.

28 November 1943

Surface patrol enroute Palawan Passage.

Decided patrol vicinity northern end Palawan Passage until dark 29 November 1943.

0945 (H) Submerged to expedite essential repairs to main engines, routine torpedoes and conduct drills. Exhaust valves of various units number 1 main engine found to be burned thru with indication that this condition existed in most units of both #1 and #2 main engines.

1728 (H) Surfaced and patrolled northern end Palawan Passage. Intermittent rain squalls.

Noon: Lat. 11-51.5 N. Long. 117-58.8 E.
Fuel used 1475; Miles 221.

29 November 1943

Surface patrol across northern end Palawan Passage. Overcast with intermittent rain.

0547 (H) While on course 180 (T)

* * * sighted destroyer bearing 164 (T), range about 10,000 yards on northerly course. Rain squall had just passed and with sunrise at 0608, visibility was improving rapidly. Distinguished hulls of two large ships beyond and just ahead of escort. Angle on bow about 50° port. Radar finally obtained range of 14,000 yards and two more ships were distinguished well separated from those first sighted. With visibility conditions prevailing it was impossible to get ahead by running on the surface so at

0552 (H) Submerged for approach. At 0557 (H) identified convoy of 1 AO, 2 AK, and 1 AP in 2 two-ship sections in approximate column formation 030 (T) with DD escort of Minekaze class on port quarter of rear ship. (Ship contact No. 10). Interval between sections about 1500 yards with a distance between ships of 400 yards. Came to normal approach

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29 November 1943 (Cont.)

course to gain attack position on rear two ships which would pass at closest range.

At 0609 (H) convoy zipped to course 005 (T) and escort increased speed to take position on port flank of first section ships.

Establish convoy speed as 10 knots. At

0616 (H) Steadied on course for 100 port track, straight bow shot. The range was excessive but water surface was ruffled and continuous periscope observation has been maintained. Both plot and TDC checked accurately. Planned to fire 4 torpedoes at AK and 2 at AP (last ship in column) then swing right for stern tube shot at DD, when she headed toward firing point.

0621-20 (H) Fired #3 tube.

0621-28 (H) Fired #4 tube.

0621-35 (H) Fired #5 tube.

0621-42 (H) Fired #6 tube.

0621-44 (H) While swinging periscope to obtain set up on the AP, heard premature explosion of first torpedo fired - figured no time now to swing for straight shot so at

0621-54 (H) Fired #1 tube aimed at mainmast of AP.

0622-00 (H) Fired #2 tube and swung right while observing the targets.

0623-00 (H) Observed and heard hit on first target between stack and after coal posts.

0623-10 (H) Observed and heard second hit under stack. AK took port list, started smoking and settling aft.

0623-39 (H) Observed splash about in position where premature explosion had occurred and noticed plane zooming this spot. (A/C contact No. 10). Heard bomb explosion.

0623-40 (H) Observed hit abaft stack on second target.

0623-50 (H) Heard another bomb explosion closer - destroyer closing rapidly. Assumed plane had now sighted periscope which had been 10 feet in the air for the past 30 seconds while we were making full speed to gain depth control. Started deep. Heard crackling and groaning sounds of ship breaking up thru the hull and over sound gear. Screws stopped on bearing of AP.

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29 November 1943 (Cont.)

- 0626-30 (H) Heard 2 explosions one of which sounded like torpedo exploding at end of run, and the other an explosion aboard the target. Heard 2 more bomb explosions while going deep and at 0627 (H) first depth charge. Escort made about 3 runs (no pinging) dropping one or two charges on each run, none of which was closer than 400-500 yards. At 0629 (H) sound reported screws of AP starting up and making 80 RPM.
- 0638 (H) Last depth charge and escort heard drawing away to northeast.
- 0641 (H) Started back to periscope depth.
- 0712 (H) At periscope depth about 2 miles from attack position. Misty rain-sighted nothing. At 0730 visibility improved to about 6 miles but still sighted nothing of convoy. Re-loaded. Overcast with variable visibility which improved at 0900. In view of visibility, air coverage, fuel requirements, and condition of main engines which limited speed to about 13 knots decided surface chase was futile.
- 1802 (H) Surfaced and proceeded Balabac Strait.
Noon: Lat. 11-40 N.; Long. 118-28.5 E.
Fuel used 310; Miles 73.

30 November 1943

Surface patrol Palawan Passage. Overcast with intermittent rains. No fix since 27 November 1943.

- 1200 (H) Obtained fix in position 4 miles southeast of Bombay Shal. Rain during afternoon.
- 2230 (H) Commenced transit Balabac Strait.
Noon: Lat. 09-23 N.; Long. 116-58.8 E.
Fuel used 1330; Miles 149.

1 December 1943

- 0108 (H) With Comiran Island light bearing 142 (T) distant 5000 yards, made radar contact bearing 300 (T), range 900 yards, on apparently stationary object. Not sighted and radar contact faded out at 1450 yards. Probably buoy which plotted in Nasubata Channel midway between Roughton and Comiran Islands.

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1 December 1943 (Cont.)

- 0927 (H) Sighted small one-masted native sailing vinta bearing 088 (T), distant 12 miles on northwesterly course. (Own position lat. 07-24 N. long. 119-03.5 E.).
1537 (H) Submerged for trim, repairs to SJ radar and check of torpedoes.
1618 (H) Surfaced.
1650 (H) Sighted Taja Island (Pearl Bank) bearing 124 (T), distant 12 miles. To reach desired position in Celebes Sea as quickly as possible proceeded via Sibutu. Noon: Lat. 06-48.2 N.; Long. 119-15.2 E. Fuel used 2970; Miles 309.

2 December 1943

- Surface patrol across Celebes Sea.
0100 (H) Transmitted serial two relative attack on 29 November 1943, present position and intention proceed Darwin.
1709 (H) Submerged for trim.
1732 (H) Surfaced.
Noon: Lat. 03-43.8 N.; Long. 122-32 E.
Fuel used 3185; Miles 343.

3 December 1943

- 0552 (H) Obtained fix on Sangi Islands.
1018 (H) Sighted type "Rufe" or "Betty" plane (A/C contact No. 11) distance 14 miles, elevation 5000 feet, on northerly course probably transport plane enroute Memado to Davao.
1021 (H) Being in desired position, submerged.
1158 (H) Surfaced and patrolled across likely enemy routes.
1955 (H) Set course for Molukka Passage via Siaoe Passage.
Noon: Lat. 03-29.4 N.; Long. 125-03.4 E.
Fuel used 2810; Miles 299.

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4 December 1943

- Surface patrol Molukka Passage.
0941 (H) Aircraft radar contact at 23 miles closing.
Lost contact at 14 miles. (A/C contact No. 12).
0947 (H) Submerged when contact closed rapidly from 12 to 6 miles. Overcast and plane not sighted.
1308 (H) Surfaced, and continued enroute Darwin, passing between Buru and Sulu Sanana Islands.
Noon: Lat. 00-04 S.; Long. 126-13 E.
Fuel used 1850; Miles 270.

5 December 1943

- Surface patrol passing west of Buru Islands and in the Banda Sea. Rain squalls thruout day and night.
1111 (H) Aircraft radar contact at 22 miles which closed slowly to 18 miles and then faded out. (A/C contact No. 13).
2100 (H) Transmitted serial three relative present position and ETA Darwin.
Noon: Lat. 04-09 S.; Long. 125-56.4 E.
Fuel used 3110; Miles 295.

6 December 1943

- Surface patrol enroute Darwin.
0557 (H) Submerged in passage between Wetar and Romang Islands.
1817 (H) Surfaced.
2113 (H) Decoded dispatch relative unloading torpedoes at Darwin.
Noon: Lat. 07-37.5 S.; Long. 127-08 E.
Fuel used 2565 ; Miles 265.

7 December 1943

- Enroute Darwin on surface. Continuous rain.
1900 (H) Decoded dispatch relative rendezvous Darwin.
Noon: Lat. 10-38.5 S.; Long. 128-41 E.
Fuel used 2360; Miles 169.

8 December 1943

- 0416 (H) Contacted escort.
1051 (H) Moored. Fueled, transferred torpedoes, and continued repairs to main engines.
1858 (H) Underway.

CONFIDENTIAL

8 December 1943 (Cont.)

1946 (H) Reversed course upon receiving visual message from transport plane relative mail.

2135 (H) Received mail via launch. Departed harbor enroute Fremantle. Reduced load on two operating engines to 700 KW.

Noon: Darwin

Fuel used 1710; Miles 195.

9 December 1943

Enroute Fremantle.

0834 (H) Aircraft radar contact at 7 miles. (A/C contact No. 14) probably rain squall. Submerged, checked trim and at

0941 (H) Surfaced.

Noon: Lat. 12-17.5 S.; Long 127-41 E.

Fuel used 2015; Miles 193.

10 December 1943:

Enroute Fremantle.

Noon: Lat. 13-42 S.; Long. 123-20.2 E.

Fuel used 2940; Miles 268.

11 December 1943

Enroute Fremantle.

Noon: Lat. 16-20 S.; Long. 119-22 E.

Fuel used 2955; Miles 279.5

12 December 1943

Enroute Fremantle.

Noon: Lat. 18-32.6 S.; Long. 115-31.4 E.

Fuel used 2950; Miles 260.

13 December 1943

Enroute Fremantle. Head seas.

2200 (E) Transmitted COD serial 4 relative ETA.

Noon: Lat. 21-08.5 S.; Long. 112-43 E.

Fuel used 2960; Miles 245.

14 December 1943

Enroute Fremantle. Speed reduced to 7-8 knots by head seas.

Noon: Lat. 24-23 S.; Long 112-08.5 E.

Fuel used 2430; Miles 193.

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15 December 1943

Enroute Fremantle.

Noon: Lat. 27-54 S.; Long. 112-29 E.

Fuel used 2945; Miles 212.

16 December 1943

Enroute Fremantle.

Contacted escort and proceeded in harbor.

Noon: Lat. 31-36.5 S.; Long. 114-54.8 E.

Fuel used 3350; Miles 262.4

CONFIDENTIAL

(C) WEATHER

Weather was generally fair except for the period 18-24 November when a miniature typhoon passed over the Tongking Gulf and the northern portion of the South China Sea area. On 18 November while in the Tongking Gulf, wind rose in 4-5 hours from a calm to a northeast force 6 with correspondingly high sea, which rendered periscope patrol difficult. No radical barometer change preceded the sudden rise. Wind rose steadily until 20 November when it reached its peak, estimated force 9-10 with seas 8-9, in the vicinity of latitude 16-N., longitude 110-E. Wind and seas gradually moderated so that on 24 November while submerging from aircraft it was possible to take periscope observations at speed of 5 knots with seas on the beam. During the entire period of the storm, the wind did not vary more than 10 degrees to right or left of northeast.

(D) TIDAL INFORMATION

No unpredictable currents were encountered.

(E) NAVIGATIONAL AIDS

No lighted navigational aids were sighted. Observed (thru the periscope) from southward at ranges over 8 miles Kulao Rai light (lat. 15-23 N.; long. 109-09 E.) appears well separated from the island and gives the impression of a ship's mast. There are no suitable landmarks on the Indo-China coast between Capes Bantangan and Mia. In Palawan Passage, during daylight, the breakers around Bombay Shoal were clearly visible at a range of 8 miles.

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(F) SHIP CONTACTS

R - SJ Radar SN - Surface Night
SD - Surface Day P - Periscope
 Submerged.

No:	Time:	Latitude	Type:	Dist:	Course:	cont-:	Ini-	How
		: Date:	: Longitude	: Range	: Speed	: Acted:		<u>Remarks</u>
1	:1438 K:	04-35 S.	AK	:24000:	070	: SD	Only tops	
	:Oct 24:	125-48.5 E.			:S-12?		of mast,	
							funnel and	
							deck house	
							seen. Lost	
							contact	
							after chase.	
2	:0556 H:	16-55.5 N.	A0	: 5000:	Stop-	: P		
	:Nov 8 :	116-09 E.			: ped			
3	:0618 H:	16-57 N.	SC	: 9000:	Var-	: P	No attack	
	:Nov 8 :	116-11 E.	Boat:		: ious		possible.	
4	:0434 H:	16-41 N.	Fish:	6000:	lying-	: SN	Avoided	
	:Nov 11:	108-45 E.	:ing		:to		detection.	
5	:0507 H:	16-30 N.	Traw:	7500:	345	: SN-R	Avoided	
	:Nov 11:	108-48 E.	:ler		: S 6		detection.	
6	:0211 H:	18-11 N.	Traw:	6500:	290	: R-SN	Avoided	
	:Nov 19:	107-30 E.	:ler	: 3500:	S 3		detedtion.	
7	:0445 H:	15-37 N.	Con-:	12000:	055	: R	2 ship con-	
	:Nov 20:	109-54 E.	voy		: S 6		voy with	
							escort.	
							Lost con-	
							tact in	
							storm.	
8	:1050 H:	17-15 N.	3-AK:	12000:	050	: SD	Lost con-	
	:Nov 23:	111-06 E.	:l-es:		: S 6.5:		tact after	
			:cort:				chase.	
9	:2053 H:	19-10 N.	un-	7700:	070	: R	Avoided	
	:Nov 23:	112-42 E.	:ident		: S 6		Detection	
			:ified					

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(F) SHIP CONTACTS (Cont.)

No:	Time	Latitude	Type	Ini-	How	cont-
Date	Longitude			:trial	:Course	:acted
				:Range	:Speed	:Remarks
10:0547	H: 11-44.7 N.	:1-A0	:10000	:030	: SD	:Torpedo
:Nov 29	:118-35 E.	:2-AK		: S 10		:Attack
:	:	:1-AP		:		#1
:	:	:1-DD		:		

(G) AIRCRAFT CONTACTS

P - Periscope Sighting

R - SD Radar

S - Surface Sighting

NS - Not Sighted.

Miles How

No:	Time	Latitude	Type	Ini-	Cou-	con-
Date	Longitude			:trial	:rse	:tact
				:Range	:Speed	:Remarks

1 :1438 K: 08-00 S. :Ruth: 2 :East : P :Altitude
:Oct 23:128-17 E. : : : : : :300 ft.

2 :1600 K: 04-33 S. : NS : 21 : -- : R :Contact
:Oct 24:125-49 E. : : : : : :closed to
: : (own posit- : : : : : :18 then
: : ion) : : : : : :disappeared.

3 :1625 K: 04-31.5 S. : NS : 10 : -- : R :Contact
:Oct 24:125-49 E. : : : : : :closed to
: : (own posit- : : : : : :4 while
: : ion) : : : : : :submerging.
: : : : : :Probably
: : : : : :same as
: : : : : :contact #2.

4 :1110 K: 01-22 S. : NS : 23 : -- : R :Contact
:Oct 25:126-41.2 E. : : : : : :closed to
: : (own posit- : : : : : :18 then
: : ion) : : : : : :opened to
: : : : : :26 when
: : : : : :disappeared.

5 :1131 K: 01-10 S. : Mavis 7 :South: S :No radar
:Oct 25:126-36 E. : : : : : :contact.
: : : : : :Position
: : : : : :angle 4°.
: : : : : :Probably
: : : : : :same as #4.

CONFIDENTIAL

(G) AIRCRAFT CONTACTS (Cont.)

No:	Time	Latitude	Longitude	Type	Alt.	Course	cont-	Ini	How	Remarks
6	:0525	H: 01-35 S.	:Oct 26:125-23 E.	NS	16	--	:	R	:Submerged	
									:when con-	
									:tact clos-	
									:ed to 10	
									:miles.	
7	:0945	H: 17-38 N.	:Nov 9 :113-11 E.	NS	24	--	:	R	:Submerged	
									:when con-	
									:tact clos-	
									:ed to 14	
									:miles.	
8	:0927	H: 17-15 N.	:Nov 21:111-06 E.	NS	13	--	:	R	:Closed to	
									:9 miles	
									:then open-	
									:ed to 13	
									:when faded	
									:out.	
9	:1018	H: 17-32 N.	:Nov 24:111-10 E.	NS	9	--	:	R	:Submerged	
									:when con-	
									:tact clos-	
									:ed to 6	
									:miles.	
10	:0623	H: 11-50 N.	:Nov 29:118-35.7 E.	Ruth	1/4	Zoom-	:	P	:Type not	
						ing	:		:definite.	
									:Carried	
									:at least	
									:4 bombs.	
11	:1018	H: 3-17 N.	:Dec 3 :123-03 E.	Rufe	14	North	S			
				or						
				Betty						
12	:0941	H: 00-04 N.	:Dec 4 :126-12.5 E.	NS	23-4	--	:	R	:Picked up	
									:at 22 miles.	
									:Contact	
									:closed to	
									:4 miles	
									:while sub-	
									:merging.	

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(G) AIRCRAFT CONTACTS (CONT.)

No:	Time	Latitude	Type	Alt.	Course	cont-	Ini-	How
		: Date	: Longitude		: Range	: Speed	: Acted	: Remarks
	13:1111 H:	04-02 S.	NS	22	--	--	R	Closed
	: Dec 5	: 125-52 E.	:	:	:	:	:	: slowly
		:	:	:	:	:	:	: to 18
		:	:	:	:	:	:	: miles
		:	:	:	:	:	:	: then dis-
		:	:	:	:	:	:	: appeared.
	14:0834 H:	12-24 S.	NS	7	--	--	R	Probably
	: Dec 9	: 128-12 E.	:	:	:	:	:	: rain
		:	:	:	:	:	:	: squall.

(H) ATTACK DATA

U.S.S. COD (SS224) Torpedo Attack No. 1 Patrol No. 1

Time 0621 (H) Date 29 November 1943 Lat. 11-42.5 N.
Long. 118-30 E.

Target Data - Damage Inflicted

DESCRIPTION

While on surface at 0547 (H) (25 minutes before sunrise) sighted destroyer of Minekaze class bearing 16 degrees on port bow at range of 10,000 yards. Visibility had been poor due passing rain squalls but was improving rapidly. Radar having obtained range of 14,000 yards on a bearing slightly ahead of destroyer, sighted outline of two large ships slightly ahead and about 3000 yards beyond DD. Then sighted one smaller ship believed to be second escort (later identified as tanker) about 2000 yards ahead of formation, followed at short distance by a large ship. The formation consisted of 2 two-ship sections in approximate column, interval between sections about 1500 yards, distance between ships about 400 yards. Escort, when sighted was stationed on port quarter of rear ship, but at sunrise moved to a position on port beam of second ship. Details of the leading ship (AO) not definitely established, but from general appearance it resembled the Kiyotada Maru.

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(H) ATTACK DATA - (Cont.)

(p.252 O.N.I. 208-J). Second and third ships in formation were identical AKs and similar in all observed respects to the Nagara Maru (p.79 O.N.I. 208-J). Both were painted a dark color (black or blue) and the ship attacked exhibited a very prominent false bow wave. The transport (rear ship in column) was similar to the Naminoue Maru (p.63 O.N.I. 208-J).

Ships Damaged or Probably Sunk:

- (1) Number: Two
- (2) Type: (a) AK(MKKFKM) - 7150 tons - similar Nagara Maru.
(b) AP (MFM) - 4730 tons - similar Naminoue Maru.

Damaged Determined by:

- (a) Observed 2 torpedoes hit and ship list to port, settling aft. Heard crackling and groaning noise thru hull and over sound gear for 10 minutes after going below periscope depth. Believe this ship sunk.
- (b) Observed 1 torpedo hit. No immediate damage apparent. Screws stopped but after about 6 minutes, started up again. Torpedo hit appeared to be either magnetic or low order, since it did not result in usual ripping and tearing sounds associated with contact hit.

Target (a) Draft 20 Course 005 (T) Speed 10 Range 2450
(b) Draft 13 Course 005 (T) Speed 10 Range 2400

Own Ship Data

- (a) Speed 3 Course 085 (T) Depth 62 Angle 0
- (b) Speed 3 Course 085 (T) Depth 61 Angle 0

Fire Control and Torpedo Data

Type Attack

Periscope attack submerged. Predetermined target bearing set into TDC, and first torpedo fired when target stack crossed periscope crosswires. Other torpedoes fired on generated bearing with observed target bearing applied to TDC before each shot. The last torpedo was inadvertently fired before gyros were matched.

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(H) ATTACK DATA (Cont.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	99 P	98 P	100 P	101 P
Gyro Angle	001	002	000	001
Depth Set	10	12	10	12
Power	High	High	High	High
Hit or Miss	Miss	Hit	Hit	Miss
Erratic	Yes	No	No	No
Mk Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	23888	23078	23986	24514
Mk Exploder	6-1A	6-1A	6-1A	6-1A
Serial No.	12049	12410	12050	12051
Actuation Set	M	M	M	M
Actuation Actual	M	C	C	Bottom
Mk Warhead	16	16	16	16
Serial No.	11079	2377	10095	6038
Explosive	Torpex	Torpex	Torpex	Torpex
Firing Interval	0	8	7	8
Type Spread	0	1 1R	1L	2R
Sea Conditions	Slight - Chop			
Overhaul Activity	Left 80	Left 80	Left 80	Left 80

Remarks:

First torpedo (#3 tube) heard to premature after 24 second run.

Second torpedo (#4 tube) made apparent contact hit between stack and after goal post.

Third torpedo (#5 tube) made apparent contact hit under stack.

Fourth torpedo (#6 tube) missed (not sighted). Heard to explode after 4½ minute run.

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(H) ATTACK DATA (Cont.)

Tubes Fired.	No. 1	No. 2
Track Angle	86 P	85 P
Gyro Angle	014	015
Depth Set	10	12
Power	High	High
Hit or Miss	Hit	Miss
Erratic	No	No
Mk. Torpedo	14-3A	14-3A
Serial No.	23821	23837
Mk. Exploder	6-1A	6-1A
Serial No.	12416	12494
Actuation Set	M	M
Actuation Actual	M	Bottom
Mk Warhead	16	16
Serial No.	10547	11226
Explosive	Torpex	Torpex
Firing Interval	0	7
Type Spread	0	1 R
Sea Conditions	Slight	Chop
Overhaul Activity	Left 80	Left 80

Remarks:

Fifth torpedo (#1 tube) made what appeared to be a magnetic hit or low order explosion between stack and mainmast of second target. Did not hear distinctive crackling sounds and very little splash.

Sixth torpedo (#2 tube) missed astern - gyros not matched. Heard to explode after 4 minute 40 seconds run. Sound reported all torpedoes ran hot, straight and normal. First torpedo was running okay until it prematurely.

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(I) MINES

No minelaying or sweeping operations observed.

(J) ANTISUBMARINE MEASURES AND EVASIVE TACTICS

Following the attack on 29 November 1943 a plane dropped 4 bombs. Attack was completed 15 minutes after sunrise, about 100 miles from nearest known airbase at Puerto Princesa, Palawan Island, and presence of aircraft not detected until after attack. Destroyer escort made three runs on submarine dropping 5 or 6 depth charges. Echo ranging was not heard. Negative gradient existed at 260 feet. Evasive tactics consisted of putting stern toward and going below layer.

Enemy convoy contacted in daylight during low and variable visibility had escort stationed well out (4000 yards) on flank. Difficulty was experienced getting around end, unseen by escort, while trying to maintain contact with convoy. Radar was in contact with large ships of convoy but could not pick up escort. Not one of the enemy ships sighted during this patrol smoked.

(K) MAJOR DEFECTS AND DAMAGE

Rudder

During patrol a rumbling and groaning sound developed in the rudder operating shafting, especially noticeable while operating steering by hand. Source of noise was localized in that portion of the shafting connecting the port ram and the rudder crosshead. It is believed that this shafting binds due to faulty packing in one of the stuffing tubes in the after bulkhead of after trim tank. This noise becomes progressively louder as depth is increased, and under present conditions seriously impairs ability of the ship to run silent.

Main Engines

On 27 November, main engine difficulty, evidenced by increasingly high exhaust temperatures in one cylinder unit of #1 main engine, necessitated the decommissioning of this engine for examination and repair. All exhaust valves in this unit were found to be badly burned. Compression pressure readings combined with comparative exhaust temperatures and injector micrometer settings indicated possibility

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(K) MAJOR DEFECTS AND DAMAGE - (Cont.)

of excessive exhaust valve deterioration being present in practically all units of the forward two engines and to a lesser degree in various units of the after engines. As time and operations permitted, various units in all engines were inspected and badly burned exhaust valves found in 60 percent of these units. Upon arrival Darwin, decision was made to use #1 main engine in emergencies only, to examine and repair all units of #2 and to proceed Fremantle on the after engines which were in the best operating condition. As of 8 December 1943 engine hours were: #1-1316; #2-1167; #3-1069; and #4-1042. During the period between commissioning and departure from Darwin on patrol (22 October 1943) main engines were operated at various loads up to and including full power. Since 22 October load has been limited to 750 KW except for one period of approximately 2 hours when the engines were run at 800 KW. Additional report concerning this material deficiency will be made after further examination of engines during refit.

(L) RADIO

Radio reception throughout the patrol was excellent. No serials were missed. Serious interference occurred at infrequent intervals when NPG Bams schedule at 1700 Zebra completely blocked out VIXO on 9250 Kcs. Enemy jamming on the 4235 series was intermittent and never serious on 8470 Kcs. The 12705 Kcs. frequency was not heard during the patrol. All messages were transmitted without difficulty on 8470 Kcs.

(M) RADAR

The performance of the SD was exceptional. Only on one occasion was a plane sighted prior detection by the SD. In this case plane was flying close to the water at an estimated range of 6-7 miles. Planes were reliably detected at ranges greater than 10 miles. Land was usually detected at 35-40 miles. No material failures occurred and one set of 8014A tubes gave satisfactory service over a period of 533 hours.

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(M) RADAR (Cont.)

After repairs and adjustment, SJ radar performance was excellent. Dependable land ranges of 35,000 yards were obtained, and small trawler type craft detected at 7000-9000 yards. Contact on a 7000 ton AK in convoy, made at 16,000 yards, was tracked to 20,000. A faulty connection at junction of coaxial line and rectangular wave guide in the duplexer was difficult to locate and impaired performance of this equipment for a period of 10 days. Ranging was impossible on two occasions due to traveling crystal jumping its track. Repairs in each case required 6-7 hours.

(N) SOUND GEAR AND SOUND CONDITIONS

Sound in South China Sea, north of latitude 14 N., averaged fair to good. Following ranges are indicative of results obtained:

Type of Target	Speed	JK(Max)	JP(Max)
Chidori T.B.	14	6000	5000
Chidori T.B.	8	3000	2000
AK (Nagata Maru)	10	4000	3000
Minekaze DD	24	5000	3000
Echo-Ranging (18 KC)	--	20000	--
Torpedoes	45	7000	4000

Sound conditions in Tongkin Gulf were very poor, probably due to almost continuous fish noises and shallow water.

Sound conditions along Indo-China coast in vicinity Cape Batangan were poor due rough seas.

In all areas, sound reception (sonic and super-sonic) decreased appreciably when below a density layer.

The fathometer operated excellently, single ping soundings being obtained in 20 to 900 fathoms.

The JP sonic receiver was valuable both as a sound monitor to check on own ship's noises and as a directional sound receiver, the bearings being within 1-2 degrees of those obtained with the WCA system.

The QC-JK sound head vibrates excessively at deep submergence (below 150 feet) with the ship at an angle greater than 2 degrees. During the patrol the flexible coupling between the reduction gear and QC-JK shaft failed because of mal-alignment.

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(N) SOUND GEAR AND SOUND CONDITIONS (Cont.)

Alignment was rectified by shimming up the reduction gear platform and replacing the worn rubber nobs of the flexible coupling with some improvised of leather.

(O) DENSITY LAYERS

<u>DATE</u>	<u>LAT.</u>	<u>LONG.</u>	<u>DEPTH LAYER</u>	<u>TEMP CHANGE</u>	<u>AMOUNT FLOODED</u>
10/23	8-05 S.	128-20 E.	120-150	(-) 5	2000 lbs.
10/24	4-37 S.	125-51 E.	60-235	(-) 7	4000 lbs.
10/25	1-12 S.	126-39 E.	120-200	(-) 4	--
10/25	1-54 N.	125-30 E.	30-300	(-) 5	--
10/28	7-32 N.	116-35 E.	120-240	(-) 2	--
10/30	12-19 N.	117-44 E.	210-230	(-) 6	--
10/31	15-15 N.	115-06 E.	130-230	(-) 12	8000
11/2	16-11 N.	115-35 E.	30-200	0	--
11/4	15-00 N.	111-08 E.	120-125	(-) 6	--
11/6	14-35 N.	113-30 E.	100-250	(-) 15	12,000
11/8	16-59 N.	115-59 E.	180-260	(-) 10	6,000
11/10	16-34 N.	108-47 E.	90-120	(-) 3	--
11/10	16-34 N.	108-47 E.	120-150	(+) 3	--
11/10	16-34 N.	108-47 E.	150-250	0	--
11/16	20-18 N.	108-27 E.	30-110	0	--
11/18	20-17 N.	108-17 E.	30-110	0	--
11/24	17-33 N.	111-12 E.	220-240	(-) 6	--
11/27	13-16 N.	115-35 E.	130-200	(-) 12	8,000
11/28	11-42 N.	118-03 E.	260-280	(-) 3	--
12/1	06-11 N.	119-22 E.	30-250	0	
12/2	03-02 N.	123-28 E.	18-240	(-) 4	--

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(P) HEALTH, FOOD AND HABITABILITY

Health of the crew was good. Nine members of the crew were admitted to sick list with infections, fevers, and minor injuries. A total of 57 man days were lost.

Food was satisfactory in quantity and quality. Habitability, in general, was excellent.

(Q) PERSONNEL

This was the first war patrol for approximately 80 percent of the officers and crew. All hands adapted themselves rapidly to wartime conditions and performed their duties in a highly satisfactory manner. Ninety percent of the crew is now qualified for submarine duty. The performance of officers and crew under combat conditions compared favorably with that of much more experienced personnel.

(R) MILES STEAMED - FUEL USED

Brisbane to Area via Darwin	4333 miles	61442 gallons
In Area	4449 miles	38146 gallons
Area to Fremantle via Darwin	4412 miles	46074 gallons

(S) DURATION

Days enroute Brisbane to Area	17
Days in Area	27
Days enroute Area to Base (via Darwin)	19
Days submerged	17

(T) FACTORS OF ENDURANCE REMAINING

Torpedoes	Fuel	Provisions	Personnel
18	2600 - (Darwin)	20 20	20

Limiting factor this patrol - Fuel.

SUBMARINE SQUADRON SIXTEEN

FC5-16/A16-3
Serial # 0133

(6/Es)

C-O-N-F-I-D-E-N-T-I-A-L

U.S.S. RASHER, Flagship,
28 December 1943.

FIRST ENDORSEMENT to
CO COD First War Patrol
SS224/A16-3 Serial (021)

From: The Commander Submarine Squadron SIXTEEN.
To : The Commander in Chief, UNITED STATES FLEET.
Via : (1) The Commander Submarines, SEVENTH FLEET.
 (2) The Commander SEVENTH FLEET.
Subject: U.S.S. COD - Report of First War Patrol -
Comments on.

1. The first war patrol of the U.S.S. COD was conducted in the northern portion of the SOUTH CHINA SEA areas. The total time on patrol from Brisbane to Fremantle was sixty-four days, of which forty-five days were spent in the areas and approaches thereto.

2. The COD covered her assigned area in a most thorough manner but through a combination of bad weather and ill fortune was never in a position to cash in on her few fruitful contacts. It was not until she was on her return trip that she finally attained a satisfactory attack position on a worth while target.

3. The main engines of the COD presented the major material problem encountered while on patrol and stems largely from earlier improper adjustment and inexperienced operating personnel. Aside from an unusually heavy drain on spare parts however, the refit of the engines entails no major difficulties.

4. The Squadron Commander takes pleasure in congratulating the Commanding Officer, officers and crew of the U.S.S. COD for damage inflicted upon the enemy.

J. M. HAINES.

FE24-71/A16-3

UNITED STATES NAVY

12/gms

Serial: 016

4 January, 1944.

C-O-N-F-I-D-E-N-T-I-A-L

SECOND ENDORSEMENT to:
CO COD First War Patrol
SS224/A16-3 Serial (021).

From: The Commander Submarines, SEVENTH FLEET.
To: The Commander in Chief, UNITED STATES FLEET.
Via: (1) The Commander SEVENTH FLEET.
Subject: U.S.S. COD - Report of First War Patrol -
Comments on.

1. The remarks of the Commander Submarine Squadron SIXTEEN are concurred in.

2. The Commanding Officer's determination to continue thorough exploitation of his assigned area to the absolute limit of his fuel endurance is commendable. In so doing, COD was finally able to inflict damage on an important enemy convoy in spite of handicaps of much bad weather, poor visibility, and limited speed for developing possible contacts. Expenditure of fuel necessitating returning at slow speeds, and refuelling at DARWIN lengthened this patrol to sixty-four days.

3. This patrol is considered "successful" for the award of the Submarine Combat Insignia.

4. The Commanding Officer, Officers, and Crew are congratulated on having inflicted the following damage on the enemy:

SUNK

1 - AK (NAGARA MARU TYPE) ----- 7,149 Tons

DAMAGED

1 - AP (NAMINOUE MARU TYPE) ----- 4,731 Tons

R. W. CHRISTIE.

DISTRIBUTION:
(Continued on next page)

FE24-71/A16-3

UNITED STATES NAVY

12/gms

Serial: 016

4 January, 1944.

C-O-N-F-I-D-E-N-T-I-A-L

Subject: U.S.S. COD - Report of First War Patrol -
Comments on.

DISTRIBUTION:

Cominch	(2)-Via com7thflt
Vice Opnav	(1)-Via Com7thflt
Vice Opnav Op-23C	(1)
Com1stFlt	(1)
Com2ndFlt	(1)
Com3rdFlt	(1)
Com7thFlt	(1)
Comsubs1stFlt	(2)
Comsubs2ndFlt	(4)
Comtaskfor-71	(4)
Comtaskfor-72	(2)
Comsubron-16	(1)
DivComsRon-16	(1)
Each S/M W.A.	(1)- <u>NOT TO BE TAKEN TO SEA - BURN</u>

B. L. Carr
B. L. CARR,
Commander, U.S. Navy,
Flag Secretary.

F4253
540
.....
.....

UNITED STATES FLEET
COMMANDER SEVENTH FLEET

A16-3(F-3/roj)

22 JAN 1944

Serial: 0139

C-O-N-F-I-D-E-N-T-I-A-L

THIRD ENDORSEMENT to:
CO COD First War Patrol
SS224/A16-3 Serial 021.

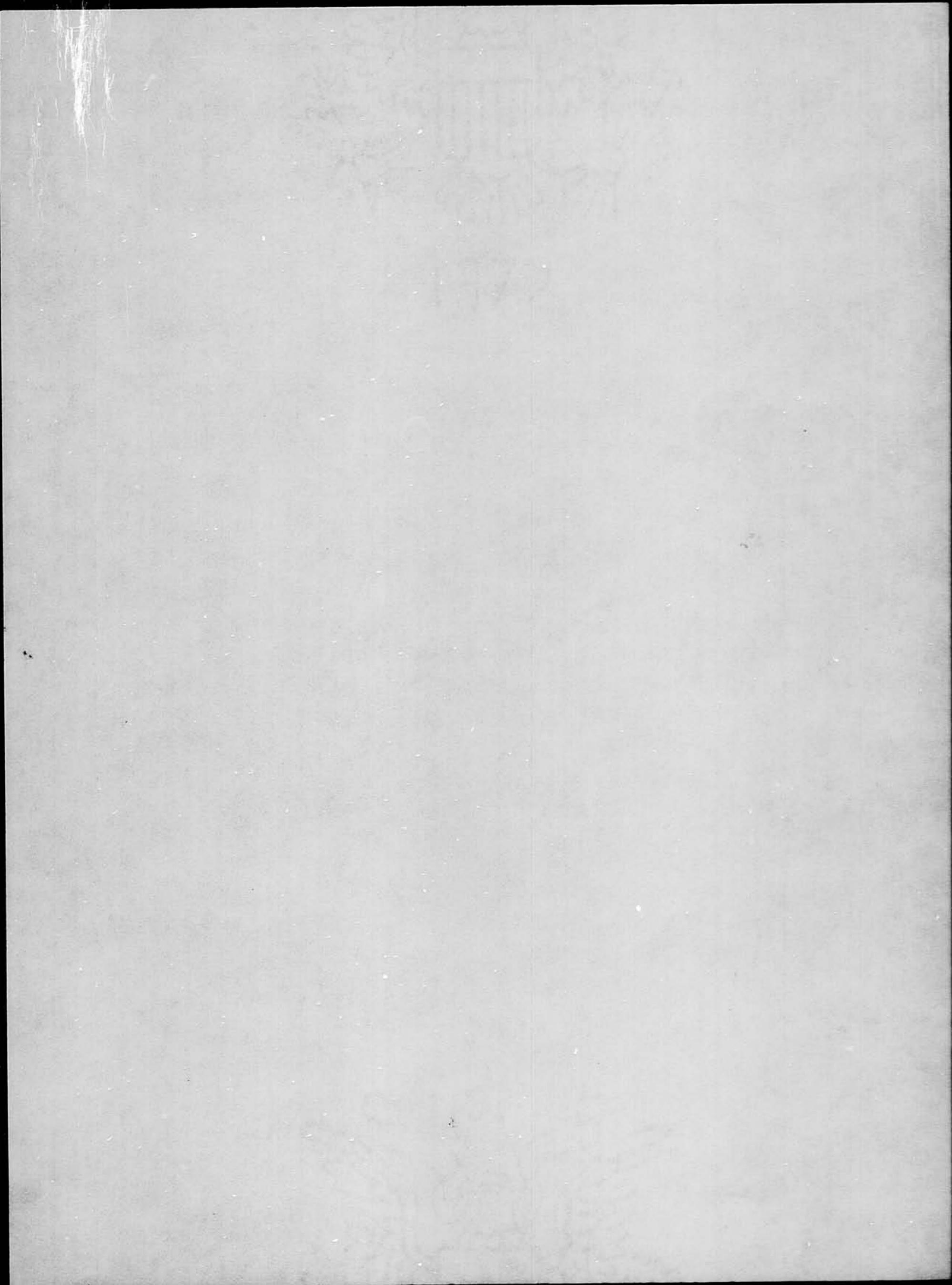
From: Commander SEVENTH FLEET.
To : Commander in Chief, UNITED STATES FLEET.
Subject: U.S.S. COD - Report of First War Patrol -
Comments on.

1. Forwarded.

R.H. Cruzen
R. H. CRUZEN,
By direction.

Copy to:
VCNO
ComSubron-16
CTF-71
CO USS COD

FILMED



SS224/A16-3
Serial (01)

S.S. COD (SS224)
c/o Fleet Post Office,
San Francisco, California

13 March 1944.

~~C-O-N-F-I-D-E-N-T-I-A-L~~
DECLASSIFIED

From: The Commanding Officer.
To: The Commander in Chief, United States Fleet.
Via: (Official Channels).
Subject: U.S.S. COD (SS224) - Report of War Patrol
Number Two.
Enclosure: (A) Subject Report.

1. Enclosure (A), covering the second war patrol of this vessel conducted in the South China Sea, the Molukka Sea, and vicinity Halmahera Island during the period 11 January 1944 to 13 March 1944 is forwarded herewith.

J. C. DEMPSEY.

DECLASSIFIED-ART. 0445, OPNAVINST 5510.1C

BY OP-09R9C DATE 5/25/72

DECLASSIFIED

71362

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(A) PROLOGUE

Arrived Fremantle, W. A., on 16 December 1943 from First War Patrol. Refit accomplished by Relief Crew Number One (Submarine Division 162) and Submarine Repair Unit #127. Following items of major importance accomplished: (1) Overhaul all main and auxiliary engines, (2) Overhaul and adjustment main hydraulic pump, (3) Elimination rudder rumble, (4) Docked and painted. Refit completed 31 December 1943.

1-3 January 1944 - Provisioned, tested machinery and continued repairs to hydraulic plant.

4-9 January 1944 - Sound test, deep dive and training. On 6 January returned Fremantle for minor repairs and adjustment hydraulic plant.

10 January 1944 - Fueled, loaded torpedoes and completed final repairs.

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(B) NARRATIVE (ALL TIMES HOU)

11 January 1944

1300 Underway in accordance ComTaskFor Seventy-One
OpOrd No. 8-4 to conduct unrestricted submarine
warfare in South China Sea.
1500 Commenced training exercises with U.S.S.
Chanticleer.
2210 Completed exercises and departed for patrol
area via Exmouth Gulf.

12 January 1944

Enroute Exmouth Gulf. Routine training.
0114 Sighted submarine bearing 040 (T), range 7500
yards on southerly course. Assumed to be either
Ray or Puffer scheduled to pass this date.
Noon: Lat. 29-52S.; Long. 113-34 E.
Fuel used 2580; Miles 150.

13 January 1944

Enroute Exmouth Gulf - Routine training.
Noon: Lat. 25-17.9 S.; Long. 112-28.8 E.
Fuel used 3970; Miles 278.

14 January 1944

Enroute Exmouth Gulf.
Moored alongside fuel barge and received 10,676
gallons fuel. Completed minor repairs hydraulic
plant.
Underway for patrol area. Routine training.
Noon: Exmouth Gulf.
Fuel used 4630; Miles 322.

15 January 1944

Enroute patrol area. Routine training.
Noon: Lat. 17-39 S.; Long. 113-07.8 E.
Fuel used 3715; Miles 311.

16 January 1944

Enroute Lombok. Routine training.
Noon: Lat. 12-43.6 S.; Long. 115-05.8 E.
Fuel used 2970; Miles 318.

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17 January 1944

Enroute Lombok.

- 0543 Submerged 30 miles south of Lombok Strait in order to make night transit.
- 1111 Sighted plane (type Cherry) bearing 314 (T), distant 2 miles on course 135 (T). (A/C Contact No. 1).
- 1943 Surfaced.
- 2145 Commenced transit Lombok Strait. Radar interference on SJ radar. Not detected on ARC.
- 2217 Radar contact bearing 353 (T), range 5600 yards. Not sighted altho range decreased to 3500 yards. Tracked on course 175 (T), speed 15 knots. Assumed to be either friendly submarine or patrol craft. Avoided. Radar interference ceased when contact was abaft beam. (Contact position Lat. 08-35.5 S.; Long. 115-44.6 E.).
- 2320 Radar contact bearing 329 (T) range 2200 yards. Not sighted altho range closed to 950 yards. Tracked on course 120 (T), speed about 3-4 knots. Assumed to be sailing craft. Avoided. (Contact position Lat. 08-24.4 S.; Long. 115-53.3 E.).
- 2359 Completed transit. Various lights and native fires noted on Misa Besar, Lombok and Bali Islands. Noon: Lat. 09-05.2 S.; Long. 115-39.2 E.
Fuel used 2030; Miles 238.7.

18 January 1944

- 0420 Sighted what appeared to be patrol craft or submarine bearing 336 (T), distant about 4 miles on southeasterly course. Radar could not make contact. Bright moonlight visibility. Closed range to estimated 5000 yards, still no radar contact. At 0445, ship sighted turned toward presenting zero angle on bow. Appeared to be submarine, but no radar contact. (Ship Contact #1).
- 0452 Submerged for identification and/or attack.
- 0454 Sighted nothing thru periscope. In view of Crevalle's experience with Japanese submarine this area, decided remain submerged. At 0552 sighted what appeared to be conning tower shears and closed until 1100 when identified as sailboat. Contact reported above may have been sailboat but appeared to me as a submarine. Two native sailboats in sight throughout day.
- 1525 Sighted Sekala Island distant 10 miles.
- 1852 Surfaced and chased sailing craft to investigate and to check radar. Proved to be native sailing craft. Contacted on radar at range of 3600 yards.

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18 January 1944 (Cont.)

Noon: Lat. 07-15.2 S.; Long. 116-15.2 E.
Fuel used 2005; Miles 158.5.

19 January 1944

- 0208 Struck log - pit log sword arm bent. Pit log out of commission. Renewed sword arm and at 0600, pit log in commission.
0704 Made trim dive.
0724 Surfaced.
0725 Submerged for unidentified aircraft sighting (A/C Contact #2).
0736 Surfaced.
0743 Sighted type Rufe aircraft (A/C Contact #3) distant 7 miles closing. Submerged. Overcast.
1058 Surfaced.
1100 SD radar out of commission.
1137 Heavy overcast with intermittent rain rendering plane detection very difficult, decided submerge until SD radar repairs completed.
1755 Surfaced.
Noon: Lat. 04-29 S.; Long. 117-38.3 E.
Fuel used 1935; Miles 109.

20 January 1944

- Transiting Makassar Strait.
1628 SD aircraft contact at 11 miles closing. (A/C Contact #4).
1630 Submerged when contact closed to 8 miles.
1852 Surfaced and proceeded along traffic lanes Makassar - Tarakan and Tarakan - Alice Channel.
Noon: Lat. 00-06.1 S.; Long. 118-56.2 E.
Fuel used 2905; Miles 274.

21 January 1944

- 0932 Submerged for trim and training. Remained submerged to repair stern plane operating gear, hydraulic plant, steering, and to inactivate magnetic exploders.
1608 Surfaced and transited Sibutu Passage.
Noon: Lat. 03-44.8 N.; Long. 119-24.1 E.
Fuel used 1740; Miles 251.5.

22 January 1944

Set course to pass 10 miles north of Pangutarang Island enroute Pearl Bank to Coronado Point, Zamboanga. Passed thru two well defined oil slicks during morning.

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22 January 1944 (Cont.)

1353 Submerged to conduct patrol across traffic lanes south and southwest of Coronado Point.

1830 Surfaced and proceeded along shipping lane enroute Naso Point.

Noon: Lat. 07-14.5 N.; Long. 121-14 E.

Fuel used 3195; Miles 270.2.

23 January 1944

0604 Submerged to conduct patrol across traffic lanes 6-10 miles off Naso Point. Left oil slick throughout morning. Routine torpedoes, conducted drills.

1841 Surfaced and proceeded to a position of possible enemy activity southwest of Cape Calavite, Mindoro.

Noon: Lat. 10-18.8 N.; Long. 121-50.6 E.

Fuel used 1905; Miles 211.9.

24 January 1944

0311 Transiting Mindoro Strait, experienced interference on SJ radar, presumably from Haddo, due to pass this date. Estimated range 12,000 yards. Estimated position Lat. 12-13 N.; Long. 120-46.5 E.

0542 Submerged in Apo East Pass.

1830 Surfaced and proceeded along traffic lane enroute possible enemy activity north of Palawan Passage.

2311 Burned out stern plane clutch solenoid. No spares on board. Replaced with jury rig.

Noon: Lat. 12-55.2 N.; Long. 120-23.3 E.

Fuel used 2235; Miles 180.4.

25 January 1944

0602 Submerged in position north of Palawan Passage.

1800 Surfaced and proceeded to patrol area off China Coast.

Noon: Lat. 12-09 N.; Long. 119-00 E.

Fuel used 755; Miles 125.

26 January 1944

Enroute patrol area. During afternoon conducted drills, surfaced and submerged.

Noon: Lat. 12-47 N.; Long. 115-41.5 E.

Fuel used 1620; Miles 199.3.

27 January 1944

Enroute patrol area. Conducted training drills surfaced and submerged in morning and evening.

1300 Entered assigned area. Set course for Pulo Gambir intending patrol inshore traffic lanes.

Noon: Lat. 13-24 N.; Long. 112-06.4 E.

Fuel used 1402; Miles 219.4.

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28 January 1944

Enroute patro. station south of Pulo Gambir light.

- 0640 Submerged for patrol off coast between Pulo Gambir and Mai Nha Island. Numerous sailing junks in sight during day and night.
- 1928 Surfaced, and conducted patrol off Mai Nha Island. Ninety percent of officers and crew ill either from effects of carbon tetrachloride fumes or food poisoning.
- Noon: Lat. 13-28.3 N.; Long. 109-25.1 E.
Fuel used 880; Miles 157.9.

29 January 1944

0647 Submerged 20 miles southwest of Pulo Gambir and closed coast.

1130 Sighted northbound convoy (Ship Contact #2) consisting of 1 tanker, 2 freighters and 2 or 3 escorts, bearing 207 (T), distant 10-11 miles, very close to coast. Commenced approach.

1150 Sighted one or two planes over convoy (A/C Contact #5).

1233 Went to 150 feet when float plane abruptly altered course and dived toward periscope. Convoy range about 10,000 yards, angle on bow 90 degrees starboard. With no chance of closing range submerged, decided to open out, surface and attain position for night attack. Tracked convoy submerged until 1430. From identification data possible, ships of convoy appeared to be in column with AC, similar Kiyotada Maru (p. 252, ONI 208-J) leading followed by two AKs of MFM type similar Tottori Maru (p. 205 ONI 208-J) and Taigen Maru (p. 207, ONI 208-J). One PC type escorted ahead, an SC was on off-shore beam and a trawler type escort guarded the rear. The formation followed closely the contour of the shoreline and was tracked at a speed of 8 knots. Escorts were not echo ranging.

1545 Surfaced and commenced chase of convoy. Necessary to alter course to prevent being sighted from Pulo Gambir lighthouse and by numerous sailing junks.

2031 Sighted smoke of convoy bearing 213 (T) and radar made contact at 11,000 yards. Commenced tracking from ahead and determined enemy to be zigging between 335 (T) and 040 (T) or base course 005 (T), speed 8-9 knots. Difficulty was experienced distinguishing between ships and escorts and in keeping radar on correct target.

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29 January 1944 (Cont.)

- 2122 With enemy on course 010 (T) started in but ended up too far abaft beam of formation at too great distance from track and with no target but rear escort. Pulled clear, and increased speed to get ahead.
- 2255 With convoy on course 005 (T) started in at slow speed from position well ahead. Convoy zigged toward and we were too close to track. Decided to try a run from the port side of formation where the flank escort wouldn't be in the way.
- Noon: Lat. 13-23.2 N.; Long. 109-25.2 E.
Fuel used 695; Miles 109.1.

30 January 1944

- Attempting to gain suitable firing position on convoy.
- 0131 Attempted to gain attack position on convoy's port side. Visual bearings of target (last AK in column) did not check with TDC set-up and matter was not rectified until opportunity to fire was lost. Made another attempt at 0342 which was nullified by zig away. The officers and crew, nearly all of whom were still suffering from the effects of carbon tetrachloride or food poisoning, performed their duties to the best of their abilities and the commanding officer accepts full responsibility for this fiasco. Nothing seems to click and each unsuccessful attempt to gain suitable firing position made the next try more difficult.
- 0445 Since it was becoming too light for more attempts at surface approach, took station ahead of target and at
- 0557 Submerged in estimated dawn position of convoy, about 3 miles east of Kulao Rai Island. Maintained high periscope watch but sighted nothing of convoy which may have altered course to enter Tourane Bay. Remained submerged to give crew a chance to recover from sickness and to try to forget a very sad night.
- 0951 Sighted Betty type aircraft (A/C Contact #6) bearing 244 (T), distant 3 miles on westerly course.
- 1902 Surfaced and proceeded along coast enroute area. Sighted numerous sailing junks during moonlight.
- Noon: Lat. 15-29.1 N.; Long. 109-17.3 E.
Fuel used 2425; Miles 163.7.

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31 January 1944

0515 Sighted steady white light on Nuok Island.
0635 Submerged for patrol about 2-3 miles off coast between Nuok and Hon Kau Islands. During day as many as 30 sailing junks were in sight at one time.

1905 Surfaced and patrolled along coast between Pulo Gambir and Mai Nha Island.

Noon: Lat. 13-58.8 N.; Long. 109-22 E.
Fuel used 625; Miles 116.5.

1 February 1944

0637 Submerged for patrol off Mai Nha Island. Usual sailing junks in sight during day.

1012 Sighted small trawler (Ship Contact #3) bearing 202 (T), range 8000 yards on northerly course. Trawler passed between coast and Mai Nha Island and apparently put into Fuyen Harbor.

1910 Surfaced and stood to eastward to intercept expected traffic along off-shore traffic lane.

Noon: Lat. 13-15.5 N.; Long. 109-23.7 E.
Fuel used 435; Miles 102.

2 February 1944

Surface patrol across off-shore traffic lanes. Made trim dive during afternoon and drilled fire control party on surface.

1920 Received dispatch orders relative area assignment. Set requisite course and speed.

2022 Transmitted dispatch #1 relative contact in area and information that COD now enroute new area.

Noon: Lat. 12-39.7 N.; Long. 11-52.1 E.
Fuel used 975; Miles 161.4.

3 February 1944

Surface patrol across Singapore - Hong Kong traffic lanes. Made 15 minute trim dive during morning.

Noon: Lat. 11-42.7 N.; Long. 11-55.8 E.
Fuel used 1380; Miles 205.9.

4 February 1944

Surface patrol across Singapore - Empire traffic lanes. Conducted submerged drills between 1000 and 1100.

Noon: Lat. 11-52.6 N.; Long. 112-41 E.
Fuel used 1565; Miles 162.4.

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5 February 1944

Surface patrol across Singapore - Manila traffic lanes as far east as Western Reef. Conducted submerged drills between 0800 and 0900.

2130 Decoded dispatch relative availability coastal patrol area.
Noon: Lat. 11-06.5 N.; Long. 113-56 E.
Fuel used 520; Miles 137.6.

6 February 1944

Surface patrol across Singapore - Empire traffic lanes.

1651 Submerged for drills.
1745 Surfaced and continued patrol. Visibility excellent thruout day and night.
Noon: Lat. 11-47.5 N.; Long. 112-31.2 E.
Fuel used 565; Miles 156.3.

7 February 1944

Surface patrol across traffic lanes. Adjusted course and speed to patrol across off-shore traffic lanes during daylight and after sunset set course to close coast. Made 15 minute trim dive during morning.

Noon: Lat. 13-45 N.; Long. 111-44.6 E.
Fuel used 545; Miles 126.1.

8 February 1944

Closed coast in vicinity Cape Mia.

0633 Submerged 3 miles off Cape Mia and conducted patrol 2-5 miles off beach between Capes Sa Hoi and .a. Visibility excellent during day.
0729 Sighted sailboat six miles to seaward on southerly course.
1927 Surfaced 4 miles east of Cape Mia in bright moonlight. SJ radar out of commission. Headed up moon while charging batteries, then patrolled along coast between Cape Mia and Kulao Rai.
Noon: Lat. 14-42.2 N.; Long. 109-08.4 E.
Fuel used 1080; Miles 170.8.

9 February 1944

0336 Sighted sailboat close inshore vicinity of Cape Batangan.
0642 Submerged for patrol 3-4 miles off beach between Cape Mia and Nuok Island.

CONFIDENTIAL

9 February 1944 (Cont.)

- 0739 Sighted 3 sailboats on southerly courses in vicinity Cape Mia. Appeared to be native junks.
- 1430 Sighted type Pete plane, altitude 1000 feet, distant 8 miles over Cape Sa Hoi on northeasterly course. (A/C Contact #7).
- 1751 Sighted ship (Ship Contact #4) bearing 308 (T), distant 5 miles on southerly course hugging coast having just rounded Tamkwam Point. Commenced approach. Ship difficult to distinguish in haze over shoreline. Appeared to be well-deck M-F-M freighter of 5000 tons similar "Saiho Maru". Subchaser escort. Angle on bow at start of approach was 50-60 port. Tracked at 8 knots on general southerly courses conforming to contour of beach.
- 1813 Sighted second ship (Ship Contact #5) bearing 236 (T), about 6 miles ahead of first also on southerly course. Range about 12,000 yards with 120 port angle on bow. This ship appeared to be following a track 1-2 miles off the beach.
- 1845 At sunset periscope observations became difficult and it was obvious that we couldn't close range sufficiently for attack. Continued tracking by periscope and radar until 1940 when opened coast and at
- 2013 Surfaced in full moon, and commenced chase planning to get in position for submerged attack on first ship in vicinity of Hon Kan. Attempted transmit contact report via radio without success. Tried unsuccessfully contact Billfish whose area we were entering via MN.
- 2151 Made radar contact at 12,000 yards and commenced tracking target. Tracked on course 150 (T), speed 7 knots.
- 2233 Sighted target passing between Hon Kan Island and mainland, range 12,000 yards. Checked set up with visual bearings and radar. Full moon prohibited surface attack.
- 2238 Submerged for attack.
- 2240 Sighted target thru periscope, no escort visible so assumed this to be leading ship of two sighted during day.
- 2305 Fired 4 torpedoes from bow tubes, on 115 port track, average range 1800 yards with gyro angles 3 to 6 left. No hits. Torpedoes tracked by sound apparently ran hot. Since target appeared neither to take evasive action nor to be cognizant that it had been fired upon, decided remain submerged this vicinity, reload and await second target before surfacing for further chase.
- Noon: Lat. 14° 3 N.; Long. 109-10.5 E.
Fuel us 730; Miles 124.4

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10 February 1944

- 0028 Not having sighted second target, surfaced and commenced chase of first. Tried again to transmit contact report and to communicate with Billfish via MN.
- 0129 Sighted bow wave of submarine (Ship Contact #6) dead ahead with small angle on bow and making high speed. Noted radar interference and finally made radar contact at 6400 yards. Assumed to be Billfish, but could not contact via MN, radio, or blinker tube. Turned away, increased speed, and cleared to seaward.
- 0215 Contacted Billfish on MN, gave him dope on ships sighted: i told him we were chasing.
- 0230 With night visibility prevailing and target against land background, decided best bet was to intercept at estimated dawn position just north of Cape Varella between Perforated Rocks and mainland.
- 0420 Sighted what was believed to be Perforated Rocks dead ahead. Radar finally made contact at 8000 yards. Decreased speed and recognized objects to be 2 subchaser or trawler type escorts and 1 small escort type freighter of about 400-500 tons, on northerly course. (Ship Contact #7). Ships were in line of bearing covering a front of about 1 mile at speed 3-4 knots.
- 0428 With range 6000, submerged to prevent being sighted and to attack if suitable targets were available. Passed flank A/S vessel at range of 800 yards. No echo ranging was heard. After observing ships at close range, decided they were A/S ships, probably sent out in view of the torpedo attack, my repeated attempts at radio transmissions and the MN communication with Billfish. Continued submerged to desired position between Perforated Rocks and mainland of Cape Varella which was reached at 0600.
- 0730 Sound heard two "pings".
- 0747 Heard explosion at great distance to northward. Sounded like torpedo explosion. Continued submerged patrol between Perforated Rocks and northeast point of Cape Varella, about 1-2 miles off beach.
- 0928 Sighted small steam trawler (80-100 tons) which rounded Cape Varella at a distance of 500-600 yards on a southerly course at speed 7 knots. (Ship Contact #8).
- 1101 Sighted similar type trawler on same track and at same speed. (Ship Contact #9).

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10 February 1944 (Cont.)

- 1105 Sighted 21 twin-engine bombers (type Betty) on course 170 (T), elevation 2000 feet, range 2-4 miles. (A/C Contact #8).
1223 Sighted small type "sea-truck" which passed to seaward of Perforated Rocks and rounded Varella about 200 yards off the beach. (Ship Contact #10).
1232 Sighted 2 twin-engined bombers (type Lily) on northerly course, elevation 2000 feet. (A/C Contact #9).
1943 Surfaced about 3 miles east of Varella. ARC showed no evidence of radar this vicinity. Proceeded up coast passing about 3 miles east of Pulo Gambir, to position north of Nuok Island.
Noon: Lat. 12-54.3 N.; Long. 109-29.3 E.
Fuel used 1440; Miles 144.5.

11 February 1944

- 0645 Submerged about 2 miles east of Hara Rock and patrolled 3-4 miles off beach between Hara Rock and Tamkwam Point. Sighted nothing but sailboats during this day.
1925 Surfaced and set course for area Victor in accordance with directive.
Noon: Lat. 14-27.5 N.; Long. 109-10 E.
Fuel used 1525; Miles 1273.

12 February 1944

- Surface patrol across off-shore traffic lanes.
1603 Sighted what appeared to be masts, but after half-hour chase, identified as tall bamboo cluster floating upright. Exercised gun crew.
2020 Dispatch information indicating Billfish to be well inshore, patrolled across Singapore-Empire traffic lane until midnight when set course for area.
Noon: Lat. 13-03 N.; Long. 111-40 E.
Fuel used 1320; Miles 186.

13 February 1944

- Surface patrol across shipping lanes. Made half hour trim dive and conducted drills during morning.
Noon: Lat. 12-18 N.; Long. 111-41 E.
Fuel used 690; Miles 128.

14 February 1944

- Surface patrol across shipping lanes. Half hour trim dive in morning.
2201 Transmitted Cod two dispatch reporting fuel and torpedoes on hand and lack of contacts in off-shore area.
Noon: Lat. 11-42 N.; Long. 111-44 E.
Fuel used 630; Miles 107.1.

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15 February 1944

Continued surface patrol across shipping lanes.
1600 Decoded dispatch orders assigning new area.
Set requisite course via Mindoro Strait. Made
half-hour trim dive during evening.
Noon: Lat. 12-27.7 N.; Long. 112-01.2 E.
Fuel used 525; Miles 103.6.

16 February 1944

Enroute area via Mindoro Strait. SD radar out of
commission.
1750 Changed course to close object sighted on
horizon.
1825 Identified object as power driven sampan. (Ship
Contact #11) with Rising Sun painted on deck
house and Japanese characters on bow. Position
(Lat. 12-38 N.; Long. 117-33 E.) about 160 miles
from nearest land. Manned guns. Upon closing,
sampan started running away but when overhauled,
turned toward and either opened fire with small
arms or commenced blinking a small light. Set
on fire and blew apart with 4" and 20 MM guns.
1840 Continued on track to Mindoro Strait.
Noon: Lat. 12-35 N.; Long. 116-04.9 E.
Fuel used 2350; Miles 238.7.

17 February 1944

Enroute Mindoro Strait. SD radar in commission.
Since it is impossible to transit Mindoro Strait
during darkness decided to patrol submerged north
of Apo West Pass. Decided to patrol on surface
until 1100 to reach desired position.
0338 Sighted small native fishing craft. Avoided.
0630 Made trim dive.
0653 Surfaced.
0955 Submerged on SD contact at 8 miles (A/C Contact
#10). Plane not sighted. Patrolled across
entrance Apo East and West Passes. Routined
torpedoes and conducted drills.
1848 Surfaced and proceeded via Apo East Pass.
2037 In Apo East Pass made radar contact at 6000 yards
and sighted outline of low small craft, either
patrol or fishing craft. (Ship Contact #12).
Avoided.
Noon: Lat. 12-57.8 N.; Long. 120-07.4 E.
Fuel used 2535; Miles 253.7.

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18 February 1944

Transited Cuyo East Pass and set course along enemy shipping lanes passing between Tubbataha Reef and Arena Island.

0920 Sighted native sailing craft about 12 miles to port on northwesterly course.

1506 Submerged upon SD contact (A/C Contact #11) at 8 miles which closed to 6 miles. Surface of Sulu Sea glassy and our wake extended to the horizon. Had been maintaining surface periscope watch in unlimited visibility. Altho sky was cloudless, plane not sighted.

1515 Bomb explosion, changed course and went to 200 feet.

1539 At 200 feet after venting safety tank, received another bomb closer than the first.

1600 Maintained submerged patrol, nothing sighted.

1900 Surfaced and proceeded Sibutu Passage.

Noon: Lat. 09-25 N.; Long. 120-23.3 E.

Fuel used 2945; Miles 270.

19 February 1944

Enroute Sibutu Passage.

0239 In position, Lat. 07-02 N.; Long. 120-04 E., experienced heavy interference on SJ radar which persisted until 0330. Appeared to be caused by another SJ radar, perhaps Robalo thru whose area we are passing.

0609 Submerged 10 miles north of Pearl Bank.

1912 Surfaced and proceeded enroute Celebes Sea.

2254 North of Sibutu Passage, made radar and sight contact at 2400 yards with small craft either patrol or native boat (Ship Contact #13).

Avoided.

Noon: Lat. 06-01.5 N.; Long. 119-41.8 E.

Fuel used 1705; Miles 219.9.

20 February 1944

Enroute patrol area. Overcast. SD radar out of commission.

0609 Submerged.

1151 Surfaced and proceeded along enemy traffic lanes. SD antenna grounded out, due condensation or leak. Still trying to repair.

Noon: Lat. 04-05 N.; Long. 121-06 E.

Fuel used 1930; Miles 195.3.

21 February 1944

Enroute patrol area via position of possible enemy activity west of Sangi Island.

0541 Submerged in desired position.

1819 Surfaced and proceeded focal point enemy activity via passage north of Siaoe Island.

Noon: Lat. 03-48.5 N.; Long. 124-39.1 E.

Fuel used 1400; Miles 217.

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22 February

- Patrolling along enemy traffic lane between Sangi and North Loloda Islands.
- 0523 Submerged in estimated position of enemy activity, vicinity Lat. 03-00 N.; Long. 127-00 E. and patrolled across enemy track.
- 1803 Surfaced and proceeded along estimated enemy track.
- 1843 Commenced experiencing heavy radar interference on SJ radar. Maneuvered various courses while trying to plot posit of radar interference. The source of interference plotted on widely varying courses at speeds of 90-120 knots.
- 1930 In position, Lat. 03-02 N.; Long. 126-53 E., sighted yellow flare bearing 070 (T), estimated distance about 4 miles. From appearance of flare and radar interference experienced this vicinity, presumed to be dropped from plane either hunting submarine or covering convoy. Opened to southward for 5 miles then to east and north crossing estimated track of possible convoy until 2150 when continued in easterly direction along enemy estimated track. Radar interference intermittent until 2300.
- Noon: Lat. 02-45.4 N.; Long. 126-43.8 E.
Fuel used 1845; Miles 153.

23 February 1944

- 0524 Sighted smoke and mast of ship (Ship Contact #14) bearing 240 (T), estimated range 16,000 yards on easterly course.
- 0526 Submerged for attack (one-half hour before sunrise).
- 0546 Heard echo-ranging in direction of mast.
- 0600 Target changed course to south and passed around us at estimated range 12,000 yards. Continued trailing.
- 0726 Could sight masts and stack of target which had altered course to 055 (T).
- 0757 Distinguished masts of second ship astern first.
- 0809 Sighted float plane (A/C Contact #12) coming out of clouds over convoy.
- 0818 Identified ships as one large AK or AO (similar Zuiyo Maru, p. 126 ONI 208-J) and one small MFM type AK. Small maru leading and apparently screening large maru. Constant echo ranging on 17 KCs (4-8 second interval) heard but could not sight additional escort.

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23 February 1944 (c ..)

0935 Sighted same or similar float plane over convoy.

1120 Surfaced to chase convoy.

1305 Rain squalls set in, commenced search for convoy.

1601 Sighted masts of target and commenced end around. About sunset small maru took station astern target.

1808 Made radar contact at 19,000 yards. Commenced radar track. Determined target zigging between 035 (T) and 075 (T), speed 7-8 knots. Echo-ranging continued and seem to emanate from escort maru in position 700 yards astern target.

2031 With target on course 035 (T), speed 8 knots, started in.

2038 Target zigged to course 075 (T), placing us too close to track. Hauled out and commenced another approach.

2156 With target on course 055 (T), angle on bow 35 S and range 7400 started in at slow speed planning to fire 4 torpedoes at Zuiyo Maru and 2 torpedoes at escort maru.

2201 With target range 5600 yards, angle on bow 40 S, made radar contact at 3800 yards and shortly thereafter sighted small escort of SC type range 3000 yards. Escort was in position 1800 yards 30 degrees on starboard bow of leading target. Pointed bow toward SC and continued in at 4 knots. SC passed ahead at range of 1700 yards.

2218 With range 2300 yards, own speed 4 knots steamed on course 340 (T), for 105 S track straight shot, and fired spread of 4 torpedoes at Zuiyo Maru type. First torpedo swerved to the left and prematured about 10 degrees and 400 yards on the port bow after a 25 second run. Changed course to 335 (T) for a 95 S track, straight shot at the escort maru which was about 700 yards on starboard quarter of large maru and, after obtaining best bearing possible thru the smoke of the premature, fired 2 torpedo salvo, no spread. After firing, changed course to 180 (T) and went to full speed to avoid gun fire and the SC which was reversing course at a range of 1800 yards. Second torpedo fired hit large maru under mainmast and exploded with a flash which lighted the horizon, third torpedo hit under stack with a greater flash and broke the ship in half. All parts of the ship burst into flames and it disappeared from both sight and radar about 2 minutes after being torpedoed, accompanied by numerous explosions.

CONFIDENTIAL

23 February 1944 (Cont.)

Fourth torpedo probably passed astern. No hits were observed on the smaller maru which probably maneuvered to avoid. Two torpedoes were heard detonating at end of runs. Depth charge explosion and gun fire were heard and seen for 15 minutes after firing. From the character of the explosions aboard the torpedoed ship, the appearance of the flames and the rapidity with which the ship itself blew up and sank, the cargo must have been gasoline or fuel oil.

2300 Reloaded torpedoes and set course to patrol across probable enemy traffic lanes northeast of Morotai Island.

Noon: Lat. 03-19.8 N.; Long. 128-17.6 E.
Fuel used 1305; Miles 150.4.

24 February 1944

Surface patrol across probable enemy traffic lanes northeast of Morotai Island.

0521 Submerged.

1805 Surfaced and proceeded to scene of possible enemy activity vicinity of Karakelong Island while repairing SJ radar.

Noon: Lat. 03-22.6 N.; Long. 130-10 E.
Fuel used 2340; Miles 198.2.

25 February 1944

0541 Submerged in vicinity Lat. 04 N.; Long. 127 E.

1707 Surfaced and proceeded to entrance Morotai Strait. Retuned SJ but SD will not operate.

Noon: Lat. 04-05 N.; Long. 127-07.1 E.
Fuel used 1515; Miles 177.1.

26 February 1944

0114 Made landfall on North Loloda Island and proceeded to scene of possible enemy activity vicinity South Loloda Island.

0500 Submerged off South Loloda Island and patrolled along coast.

1824 Surfaced and patrolled across possible enemy track 3-8 miles off shore.

2235 Made SJ contact bearing 166 (T), range 12,000 yards. Commenced tracking. Target not sighted against land background. Decided to track until target opened beach north of South Loloda Island.

Noon: Lat. 01-33.9 N.; Long. 127-26 E.
Fuel used 1665; Miles 195.8.

CONFIDENTIAL

27 February 1944

- 0057 Sighted target outline at range 9,000 yards (Ship Contact #15). Details not distinguished due land background. Could not locate escort, so figured escort probably trailing. Target altered course toward shore after rounding South Loloda Island so speeded up to get ahead. Water extremely phosphorescent and our background not favorable.
- 0241 With target on course 035 (T), speed 7 knots came to attack course for 75 P track and started in at slow speed.
- 0257 Made radar contact on escort at 4200 yards range. Escort about 1000 yards on port quarter of target. Increased speed to close range. Target appeared to be AK of M-7-II type, and judging by comparative radar ranges estimating length with binoculars, about 5000-6,000 tons displacement.
- 0258 With range about 3200 yards, target started signalling to escort. Escort and target opened fire. No splashes seen. Increased speed and at
- 0259 With torpedo run of 2900 yards fired spread of 4 torpedoes, increased to full speed and hauled clear. About 1 minute after firing heard depth charge explosion. Fifty seconds later saw first torpedo hit the after end of the ship with a violent explosion. A large fire immediately broke out with much smoke and a considerable portion of the stern appeared to be blown into the air. Observed a second torpedo hit amidship. Two minutes later a second more violent explosion occurred after which the flames died out and target disappeared from view. The pip on the radar disappeared at 4500 yards. Heard escort firing gun and depth charging area for 20 minutes after the attack. Echo ranging was not heard during this approach and attack.
- 0458 With overcast skies, SD out of commission and expecting aircraft search, submerged west of North Loloda Island and commenced working south to investigate enemy activity vicinity Buton Strait.
- 1750 Surfaced and continued south thru Molukka Sea.
- 1817 About 30 miles southwest of attack position, passed 3 oil drums.
- Noon: Lat. 01-51.2 N.; Long. 127-00.2 E.
Fuel used 1170; Miles 125.9.

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28 February 1944

0636 Submerged 8 miles northeast of Lifoermatola Island.

1827 Surfaced and proceeded to position off eastern entrance Buton Strait.

Noon: Lat. 01-50.9 S.; Long. 126-36 E.

Fuel used 2500; Miles 228.4.

29 February 1944

0732 Reached desired position off Buton Strait and submerged. Have 2 torpedoes forward and 8 aft.

1340 Heard echo-ranging bearing 265 (T) and closed.

1409 Sighted boats and stack of one AK, similar Yamazato Maru (p. 73 ONI 208-J) escorted by what at first appeared to be Chidori type torpedo boat later identified as Terutsuki type destroyer. Target on northeasterly course zigging between 050 (T) and 125 (T) on 4-8 minute legs at speed 12 knots. Escort, weaving in position 1000 yards ahead of target, was not identified as other than a Chidori until final stages of approach at which time set-up for a shift of targets was not satisfactory. Maneuvered for stern tube shot and at

1449 Attempted fire spread of 4 torpedoes on 95 S track, range 1900 yards, straight shots, at the Yamazato Maru. Gyro regulator overload tripped out and difficulty was experienced matching by hand. Fourth torpedo could not be fired due to frozen gyro spindle. Post-firing investigation showed that gyro angles recorded at gyro setter (aft torpedo room) lagged generated gyro angles recorded at TDC from 5 to 7 degrees resulting in misses aft. Gyro ready light showed and gyro pointer reported matched before each shot. Cause of discrepancy in gyro angles, other than personnel error, is not understood.

1454 Terutsuki ceased echo-ranging, turned toward and increased speed to more than 300 rpms, letting go first barrage of 3 depth charges right on top of us in less than 5 minutes. At this time we were passing 250 feet. Changed course, increased speed to standard and depth to 300. In spite of maneuver, Terutsuki made another good run and at

1504 Dropped 3 more which exploded at 25 second intervals very close, directly overhead.

CONFIDENTIAL

29 February 1944 (Cont.)

- 1507 Changed course, increased depth to 340 feet and commenced silent running as destroyer started intermittent echo-ranging.
- 1535 Two A/C bombs followed, at
- 1538 By 3 depth charges farther away. Intermittent pinging continued. Very slight negative gradient at 280 feet.
- 1604 Three depth charges aft.
- 1607 A/C bombs aft. Steering various courses heading toward Buton Passage.
- 1609 Destroyer apparently running retiring search curve pinging intermittently and stopping at intervals to listen.
- 1630 Necessary to increase speed to decrease depth. Destroyer had no trouble getting on us when at depths less than 300 feet. Rudder rumble very loud and deck plates rattling.
- 1635 Two explosions well aft.
- 1648 About this time the destroyer was relieved by one or two different type A/S ships. Their echo-ranging had slightly different frequency and did not seem so powerful. Also commenced hearing buzz of magnetic sweep at 10-15 minute intervals. This sound not audible at depths greater than 300 feet.
- 1730 Started to periscope depth - echo-ranging now well aft.
- 1821 Periscope depth, sighted nothing altho pinging continued to the east and southeast. Commenced working on SJ radar which has been jarred out of commission. Rain clouds around horizon. Constant pinging to south past and south.
- 1920 Surfaced to find us awash and locked from topside. Sighted nothing in poor visibility.
- 1922 Surfaced and cleared area, working around A/S vessels which were heard echo-ranging to south and southeast. One main engine flooded from too hasty starting. Headed for northwest corner of Buru Island, which appeared to be general direction of target. Charged batteries, reloaded and continued efforts to repair SJ and gyro angle setting equipment for after tubes. At
- 2400 Changed course to southeast to patrol across lanes from Buton Strait to Amboin, since there was no possibility of overhauling target before it entered Amboin.
- Noon: Lat. 04-11 S; Long. 123-57.2 E.
Fuel used 2450; Miles 220.

CONFIDENTIAL

1 March 1944

Patrolling along and across enemy track between Buton Strait and Buru Island, while repairing SJ radar and gyro angle setting mechanism after tubes. Inspected topside for damage and secured loose deck plates and planking.

0500 Submerged for patrol across traffic lanes between Buton Strait and Buru Island. Completed repairs SJ and obtained satisfactory gyro setting operation on 3 after tubes.

1814 Surfaced and proceeded to southeast leaving area 2 days after time specified in dispatch orders.

2000 Transmitted dispatch information relative present position, results and ETA Darwin.

Noon: Lat. 04-12.5 S.; Long. 125-01.1 E.
Fuel used 1275; Miles 152.

2 March 1944

Enroute Darwin. Submerged in vicinity Gunung Api, so as to make night passage thru Sermata Islands.

Noon: Lat. 06-39.4 S.; Long. 126-56.2 E.
Fuel used 2140; Miles 197.6.

3 March 1944

Enroute Darwin. To avoid Pompon, made passage between Lakor Island and Meati Miarang Reef. Overcast with intermittent rain. Submerged between 0600 and 1500.

Noon: Lat. 09-07.8 S.; Long. 128-34.0 E.
Fuel used 2540; Miles 224.1.

4 March 1944

Enroute Darwin. Continuous rain squalls.

Navigating by soundings.

0025 Transmitted dispatch requesting rendezvous Darwin.

0500 Arrived DR posit rendezvous. Visibility 1000 yards at best. Searched for escort for an hour and then for entrance buoy for another hour.

0652 Sighted entrance buoy distant 300 yards and at 0700 sighted escort coming out to meet us. Proceeded Darwin, fueled and unsuccessfully attempted repair SD radar, since in addition to other difficulties, antenna insulation was shorted. Temporarily repaired leaky main engine mufflers.

1600 Departed Darwin enroute Fremantle via assigned routing.

Noon: Darwin
Fuel used 4220; Miles 266.8.

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5 March 1944

Enroute Darwin to Fremantle.

Noon: Lat. 12-34 S.; Long. 127-30 E.
Fuel used 3075; Miles 202.8.

6 March 1944

Enroute Darwin to Fremantle.

Noon: Lat. 14-35 S.; Long. 122-15 E.
Fuel used 4805; Miles 338.8.

7 March 1944

Enroute Darwin to Fremantle.

Noon: Lat. 17-11.8 S.; Long. 117-31.8 E.
Fuel used 4080; Miles 315.8.

8 March 1944

Enroute Darwin to Fremantle.

0230 Decoded orders to take position on scouting line.
Using assumptions given in dispatch, determined
earliest meeting time to be 0000 (H), 9 March.
Own speed limited to 13.5 knots by head seas.
Set requisite course at maximum speed possible.
2200 Heavy seas retarding progress, ascertained new
earliest meeting posit and set requisite course.
Noon: Lat. 20-16 S.; Long. 112-38 E.
Fuel used 4855; Miles 334.8.

9 March 1944

Enroute assigned position on patrol line,
heavy seas.

0435 Reached assigned position on patrol line and
changed course to 188 (T) paralleling bombing
restriction lane at distance of 200 miles.
Head seas reduced speed to 10 knots.
Noon: Lat. 23-35 S.; Long. 109-06.2 E.
Fuel used 4190; Miles 297.5.

10 March 1944

Patrolling scouting track parallel to and 200
miles west of bombing restriction lane. Speed
10-12 knots. Heavy seas.

Noon: Lat. 27-45 S.; Long. 109-00 E.
Fuel used 3010; Miles 253.

CONFIDENTIAL

11 March 1944

Patrolling scouting line 100 miles west of
bombing restriction lane.

0030 Decoded dispatch relative return to Fremantle.
Set requisite course.

0903 Sighted PBY patrol plane (A/C Contact #13),
bearing 020 (T), distant 6 miles on northerly
course. Lighted identification flares and
submerged for one hour to correct trim and to
work and grease vents.

2240 Transmitted Cod serial five relative ETA
rendezvous.

Noon: Lat. 28-15.2 S.; Long. 109-36 E.
Fuel used 3035 ; Miles 260.

12 March 1944

Enroute Fremantle.

Noon: Lat. 29-07 S.; Long. 113-30.6 E.
Fuel used 3160 ; Miles 262.

13 March 1944

Enroute Fremantle.

0556 Sighted escort and proceeded into harbor.

Fuel used 2990 ; Miles 213.

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(C) WEATHER

Generally fair except south of barrier when constant heavy seas compelled reduction in speed.

(D) TIDAL INFORMATION

No unpredictable currents were encountered.

(E) NAVIGATIONAL AIDS

A steady white light was observed in the vicinity of Nuok Island light (Lat. 14-15.3 N.; Long. 109-09 E.) in advance of traffic movements along this portion of the China Coast.

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(F) SHIP CONTACTS

R - SJ Radar
SD - Surface Day
SN - Surface Night
P - Periscope Submerged.

No:	Time	Latitude	Type	Initial	Course	cont-	How
		Date	Longitude		:Range	:Speed	:acted:Remarks
1	:0420	:09-03.7 S.	:Sub	:8000	: 230	:	SN :Questionabl
		:18 Jan	:115- 6.2 E.		: 8	:	:contact. M
							:have been
							:sailboat.
2	: 1130	:13-16 N.	:Con-	:21000		:	P :Trailed sub-
		:29 Jan	:109-21.3 E.	:voy			:merged and
				:2AK			:tracked on
				:1AO			:surface.
				:3PC			:Lost con-
							:tact.
3	: 1012	:13-12 N.	:Traw	:8000	: 350	:	P :Not suit-
		: 1 Feb	:109-23 E.	:ler	: 7	:	:able tar-
							:get in view
							:of own posit.
4	: 1751	:14-27.5 N.	: AK	:10000	: 170	:	P :Trailed sub-
		: 9 Feb	:109-10 E.	: SC	: 8	:	:merged and
							:chased on
							:surface.
							:Not located.
5	: 1813	:14-19.6 N.	: AK		: 170	:	P :Leading ship
		: 9 Feb	:109-09.2 E.		: 8	:	:of (Contact
							#4) by 6 mi.
							:Attacked.
6	: 0129	:13-41.1 N.	: Bill	: 6400	: 000	:	SN :Sighted bow
		: 10 Feb	:109-24.4 E.	: fish	: 15	:	:wave at
							:8000 yds.
7	:0420	:13-01.7 N.	: 3	:11350	: 340	:	SN :Identified
		:10 Feb	:109-26 E.	:Pat-	: 4	:	:as small
				:rol			:(500 T) es-
				:Ships			:cort maru
							:and 2 traw-
							:lers. Avoided.

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(F) SHIP CONTACTS (CONT.)

				Ini-	How	
No:	Time	Latitude	Type	tial	Course	cont-
		: Date	: Longitude	: Range	: Speed	: acted: Remarks
8	: 0928	: 13-01 N.	: Traw	: 7000	: Var-	: P : Various
	: 10 Feb	: 109-23.6 E.	: ler		: ious	: southerly
					: 7	: courses con-
						: forming to
9	: 1101	: 12-54 N.	: Traw	: 7000	: Var-	: P : coast.
	: 10 Feb	: 109-26.7 E.	: ler		: ious	: Rounded Cape
					: 7	: Varella at
						: distance
						: $\frac{1}{4}$ - $\frac{1}{2}$ mile.
10	: 1223	: 12-58.5 N.	: Small			: P : Not attacked
	: 10 Feb	: 109-26 E.	: sea-	: 9000	: Various	: due to
			: truck		: 7	: planes in
						: vicinity,
						: proximity
						: to land and
						: search for
						: torpedo
						: target.
11	: 1825	: 12-38 N.	: Sam-	: 8000	: Various	
	: 16 Feb	: 117-33 E.	: pan		: 2-8	: SD : Attacked
12	: 2037	: 12-47.8 N.	: Pat-	: 6000	: 330	: SN : Avoided
	: 17 Feb	: 120-43.7 E.	: rol			
13	: 2254	: 05-12.3 N.	: Pat-	: 2400	: North-	: SN-R : Avoided.
	: 19 Feb	: 119-37.5 E.	: rol or		: erly	
				: Sail-	: 2-3	
				: boat		
14	: 0524	: 03-01.8 N.	: 1A0	: 16000	: North-	: SD : Attacked
	: 23 Feb	: 127-57.2 E.	: 1AK		: east-	
				: 1SC	: erly	
					: 7-8	
15	: 2235	: 01-22.5 N.	: 1AK	: 12000	: North-	: R : Attacked
	: 26 Feb	: 127-24 E.	: 1SC		: erly	
					: 7	
16	: 1409	: 04-12.8 S.	: 1AK	: 16000	: East-	: P : Attacked
	: 29 Feb	: 123-46 E.	: 1DD		: erly	
					: 12	

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(G) AIRCRAFT & ACTS

P=Periscope Sighting

R-SD Radar

S-Surface Sighting

NS-Not Sighted

No:	Time	Plane's Posit	Miles	How		
	Date	Latitude	Type	Ini- tial Range	Cou- rse	con- tact
		Longitude				ed
1	:1111	: 09-03.7 S.	:Cherry	: 135	: P	:
	:17 Jan	:115-36.2 E.		: 2		
2	:0723	:04-47.9 S.	: ?	: 4	: --	S :Doubtful :Sighting
	:19 Jan	:117-26.2 E.				
3	:0743	:04-46 S.	:Rufe	: 9	: 100	S :Submerged :when range :closed to 6 :miles.
	:19 Jan	:117-27 E.				
4	:1625	:00-54 N.	: NS	: 11	: --	R :Submerged :when range :closed to :7 miles.
	:20 Jan	:119-34 E.				
5	: 1150	: 13-24 N.	:Pete	: 6	:Var- ious	P :Escorting :northbound :convoy.
	:29 Jan	:109-20 E.				
6	: 0951	: 15-26.5 N.	:Betty	: 3	: 270	P :
	:30 Jan	:109-13 E.				
7	: 1430	: 13-45 N.	:Pete	: 8	: 330	P :Patrolling :coastline :in advance :of passage :of traffic.
	:9 Feb	:109-15.5 E.				

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(G) AIRCRAFT (CONT.)

No:	Time	Plane's Alt	Miles	How	Init	Type	Ini-	Cou-	con-
	Date	Latitude	Longitude				tial	rse	tact
							:Range:		ed :Remarks
8	: 1105	: 12-53.4 N.	: Betty	4-8	: 170	: P	: At least		
	: 10 Feb	: 109-25.5 E.					: 21 type		
							: Betty in		
							: formation.		
9	: 1232	: 12-53 N.	: Lily	6	: 000	: P			
	: 10 Feb	: 109-25 E.							
10	: 0955	: 12-57 N.	: NS	8	: --	: R	: Submerged		
	: 17 Feb	: 120-00.8 E.					: when range		
							: closed to		
							: 6 miles.		
11	: 1506	: 08-49.5 N.	: NS	8	: --	: R	: Closed to		
	: 18 Feb	: 120-23.3 E.					: 6 miles.		
							: Dropped 2		
							: bombs.		
12	: 0809	: 02-57 N.	: Pete	8	: Var-	: P	: Covering		
	: 23 Feb	: 128-12 E.					: ious		
							: Convey		
13	: 0903	: 28-17 S.	: PBY	6	: North	: S			
	: 11 Mar	: 109-15 E.					: erly		

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(H) ATTACK

U.S.S. COD (SS224) Torpedo Attack No. 1 Patrol No. 2

Time 2308 (H) Date 9 February 1944 Lat. 13-50.1 N.
Long. 109-20 E.

Target Data - Damage Inflicted

DESCRIPTION

Target sighted at 1813 (H) while submerged, steering a southerly course about 2 miles off beach in vicinity Anyo Point, and was about 6 miles ahead of a similar type ship which we were then tracking. Tracked submerged until 2013 (H) when surfaced and chased. Full moon and excellent visibility. Intercepted target south of Hon Kan Island, making radar and sight contact at 11,900 yards against a land background. The two ships in this convoy were separated by a distance of 6-7 miles and had one SC escort which maintained station about 1000 yards on seaward bow of rear ship. Both ships stayed within 1-3 miles of beach.

Ships of convoy were well-decked freighters of the MTM type similar to the Saiho Maru (p. 217, ONI 208-J).

Ships Sunk - None.

Ships Damaged or Probably Sunk - None.

Target - Draft 10 feet, Course 150 (T), Speed 7, Range 1800

Own Ship Data

Speed 2.3 knots, Course 220 (T), Depth 62 Feet,
Angle 0.

Fire Control and Torpedo Data

Type Attack

Periscope attack submerged. Predetermined target bearing set into TDC and first torpedo fired when target stack crossed periscope crosswires. Other torpedoes fired on generated bearing with observed target bearing applied to TDC before each shot. Trailed target submerged during hour of daylight, surfaced after dark and made radar and sight contact on target against land background at range of 12,000 yards in full moon visibility. Set course to intercept target in a position where its course would be restricted by reason of passing between the coast and Lui Ong Co island. Attained

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(H) ATTACK DATA (CONT.)

desired position, sighted target at 11,900 yards, checked set-up and submerged for attack with range to target about 9,000 yards. Picked up target thru periscope at 4,000 yards, after being coached on by sound. Fired four torpedo spread at range of 1800 yards. all of which missed. Sound reported torpedoes running in direction of target screws. None of torpedoes exploded at the end of its run. Depth of water 20 to 12 fathoms.

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	11	116	112	117
Gyro Angle	3L	6L	2½L	6½L
Depth Set	6	8	6	8
Power	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Miss
Erractic	No	No	No	No
Mk. Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	39514	25311	22968	25282
Mk. Exploder	6-4	6-4	6-4	6-4
Serial No.	11295	7669	7517	7630
Actuation Set	Contact	Contact	Contact	Contact
Mk. Warhead	16	16	16	16
Serial No.	5541	10133	2465	10157
Explosive	TPX	TPX	TPX	TPX
Firing Interval	--	13	9	10
Type Spread	0	1 ¾ L	1 ¾ R	3 ¼ L

Sea Conditions Flat Calm.

Overhaul Activity - Subiaco.

Remarks: At time of firing, target filled at least three quarters of periscope field in high power. Angle on bow was within 5-10 degrees of 90 port. Torpedoes according to sound operator ran hot, straight, and normal. Have not been able to determine reason for all missess and cannot understand why all the torpedoes failed to detonate at end of run.

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(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) Torpedo Attack No. 2 Patrol No. 2

Time 2218 (H) Date 23 February 1944 Lat. 03-53 N.
Long. 129-17 E.

Target Data - Damage Inflicted

DESCRIPTION

Targets were AO similar to Zuiyo Maru (p. 126, ONI 208-J) and an escort AK (1200-1500 tons) similar in outline to Tokati Maru (p. 116, ONI 208-J) accompanied by one SC similar SC No. 51 (p. 321 Jane's 1942). First sighted at 0524 (H) while on surface, tracked submerged until 1120 (H) and on surface until attacked at 2215 (H). During daylight small maru screened ahead, at dusk exchanged stations and trailed 600-1000 yards astern AO. SC, not sighted until shortly before attack, in position 30 degrees 1800 yards on starboard bow of AO, echo-range day and night on 17 KCS. at 4-8 second intervals. Visibility during day fair, with passing rain squalls. During night fair; AO first sighted at 7000 yards, had very little freeboard. SC first sighted at 3000 yards with angle on bow of 60-70 degrees.

Ships Sunk:

- (1) Number: One.
- (2) Type: AO(MFM), 7360 tons, similar Zuiyo Maru (p. 126 ONI 208-J).

Damaged Determined by:

Observed two torpedoes hit, ship burst into flames, break in half and blow up. Disappeared from sight and radar 2 minutes after being hit.

Target -

(Zuiyo Maru) Draft 28 Course 055 (T) Speed 7

Range 2300

(Escort Maru) Draft 12 Course 055 (T) Speed 7

Range 2000

Own Ship Data

Speed 4, Course 340 (T), Depth On Surface.

Fire Control and Torpedo Data

Type Attack

Night surface attack using TBT for bearings and SJ radar ranges. Target's course and speed determined by plot and TDC after tracking on surface. TBT bearing introduced into TDC before each shot. Target zigzagged between 035 (T) and 075 (T).

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(H) ATTACK DATA (CONT.)

Tube Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	103 S	106 3/4 S	105 S	102 S
Gyro Angle	2 L	3½ L	0	3 L
Depth Set	10	12	10	12
Power	H	High	High	High
Hit or Miss	Miss	Hit	Hit	Miss
Erratic	Yes	No	No	No
Mk. Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	24478	24743	24459	24108
Mk. Exploder	6-4	6-4	6-4	6-4
Serial No.	7635	17650	6856	6341
Actuation Set	Contact	Contact	Contact	Contact
Mk. Warhead	16	16	16	16
Serial No.	2945	1403	1043	1416
Explosive	TPX	TPX	TPX	TPX
Firing Interval	--	6	7	6
Type Spread	0	1 L	1 R	2 L
Sea Conditions	Calm	Slight	Swell	
Overhaul Activity	-	Subiaco		

Remarks: First torpedo fired (No. 3 tube) swerved about 20-30 degrees to the left after leaving the tube and prematurely after a 25 second run.

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(H) ATTACK (CONT.)

Tube Fired	No. 1	No. 2
Track Angle	96 S	91 S
Gyro Angle	4 L	8 L
Depth Set	10	12
Power	High	High
Hit or Miss	Miss	Miss
Erratic	No	No
Mk. Torpedo	14-3A	14-3A
Serial No.	24160	24419
Mk. Exploder	6-4	6-4
Serial No.	5859	7538
Actuation Set	Contact	Contact
Mk. Warhead	16	16
Serial No.	820	2318
Explosive	TPX	TPX
Firing Interval	14	10
Type Spread	0	0
Sea Conditions	Calm - Slight Swell	
Overhaul Activity	Subiaco	

Remarks: During daylight (sighted hull down) the small maru with masts and stack as high as those of the Zuiyo Maru type, appeared to be much larger than when sighted while closing for attack at night. Torpedo depths had been set at 10 and 12 feet and were not changed. Misses on second target may have been due to excessive depth setting of torpedoes since post analysis indicates draft of small AK more nearly 8 than 12 feet.

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(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) Torpedo Attack No. 3 Patrol No. 2

Time 0259 (H) Date 27 February 1944 Lat. 01-48.0 N.
Long. 127-32.8 E.

Target Data - Damage Inflicted

DESCRIPTION

Target, contacted by SJ radar at range of 12,000 yards, in position about 3 miles off beach and steering various northerly courses conforming to coastline, at speed 7-8 knots. Report of small type trailing target at distance 700-1000 yards was contacted 2 minutes before firing by S. radar at range of 4200 yards. Visibility good to seaward, poor against land background. Target appeared to be (MFM) type freighter of 400 feet length and estimated 5000-6000 tons displacement. Few details discernible. Length estimated by binoculars and size by general appearance, height of pip and radar range. (Target could be tracked at 14,000 yards by radar.) Escort details not distinguished, probably slightly larger than subchaser since it was contacted at radar range of 4200 yards.

Ships Damaged or Probably Sunk:

- (1) Number: One.
- (2) Type: Unidentified AK (MFM) - 400 feet length - estimated 5000-6000 tons displacement.

Damage Determined By:

Observed two torpedoes hit; first under stern with violent explosion which appeared to blow stern into air, and caused immediate fire with much flame and smoke. Second torpedo hit amidships with a flash and dull thud. Two minutes after second hit, a sudden flash and loud explosion occurred amidships, after which flames disappeared and ship could not be seen. About this time the pip on the radar disappeared abruptly at 4000 yards range. Escort at this time was 3000 yards astern of us.

Target *Draft 12, Course 035 (T), Speed 7, Range 3000.

* On northerly course so assumed to be unloaded.

Own Ship Data

Speed 10-12 knots, Course 141 (T), Depth On Surface

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(H) ATTACK DATA (CONT.)

Fire Control and Torpedo Data

Type Attack

Night surface attack using TBT for bearings and SJ radar for ranges. Target course and speed determined by plot and TDC after 4 hours tracking on surface. Target was against land background. Attack was hurried and range excessive due to being sighted and fired upon at range of 3200 yards. Water extremely phosphorescent and it is believed bow wave was sighted as we increased speed to close track. TBT bearing introduced into TDC prior each shot. Target appeared to start turn away shortly after firing thus increasing track angle.

Tube Fired	No. 4	No. 5	No. 6	No. 1
Track Angle	63 P	63 P	64 P	62 P
Gyro Angle	12 R	12 R	11 R	14 R
Depth Set	6	8	6	8
Power	High	High	High	High
Hit or Miss	Hit	Miss	Hit	Miss
Erratic	No	No	No	No
Mk. Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	41872	23742	25337	24392
Mk. Exploder	6-4	6-4	6-4	6-4
Serial No.	7670	11298	18044	7657
Actuation Set	Contact	Contact	Contact	Contact
Mk. Warhead	16	16	16	16
Serial No.	2590	3659	985	2317
Explosive	TPX	TPX	TPX	TPX
Firing Interval	--	7.5	7.5	7
Type Spread	0	$\frac{1}{2}$ R	$\frac{1}{2}$ L	1 R
Sea Conditions	Calm with slight swell.			
Overhaul Activity	Subiaco.			

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(H) ATTACK DATA (C)

U.S.S. COD (SS224) Torpedo Attack No. 4 Patrol No. 2

Time 1449 (H) Date 29 February 1944 Lat. 04-07 S.
Long. 123-54 E.

Target Data - Damage Inflicted

DESCRIPTION

Target sighted, while conducting submerged patrol, at range of 14,000 yards. Hazy horizon but fair visibility. Presence of target detected $\frac{1}{2}$ hour prior actual sighting due to escort's echo ranging which was heard at estimated range of 24,000 yards. Target identified as AK (MKFM) type, similar in all respects to the Yamazato Maru (p. 73 ONI 208-J). Target lightly loaded, zigged between courses 050 and 125 (T), maximum time on any leg being 8 minutes. Speed check at 12 knots (105 rpm). Escort weaved ahead of target and due to low masthead height and small angle on bow appeared to be a Chidori type torpedo boat. During last stages of approach when escort presented a larger angle on bow, it was identified as a destroyer of the Terutsuki type. The only characteristic noticed in addition to those outlined in Intelligence Report No. 145-43 of 11 August 1943 was a radar antenna of bed-spring type mounted on top of the range finder. There were at least 100 members of crew lining the rails, apparently acting as periscope lookouts.

Ships Sunk: None.

Ships Damaged: None.

Target Draft 12, Course 068 (T), Speed 12, Range 1900.

: Own Ship Data

Speed 2.1 knots, Course $155\frac{1}{2}$ (T), Depth 64 feet, Angle 0

Fire Control and Torpedo Data

Type Attack

Periscope attack submerged. Fired 3 torpedoes spread from stern tubes with predetermined target bearing set into TDC and first torpedo fired when target stack crossed periscope crosswires. Other torpedoes fired on generated bearing with observed target bearing applied to the TDC before each shot. Some difficulty was experienced getting into position for stern tube shot (2 torpedoes forward, 8 aft) due to wide zigs.

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(H) ~~A~~ (CONT.)

While turning firing course, target zigged away thereby increasing range. Attempt was made to shift fire to the Terutsuki when it was recognized as such, but it had started a weave away and the set-up was not favorable. TDC checked perfectly on Yamazato Maru target. Latched gyros about 3 minutes before firing. About one minute before firing, gyro-regulator overload tripped out, whereupon matched gyros by hand. It was found increasingly difficult to match by hand but firing was held up until gyro ready light showed and pointer reported matching before each shot. It was impossible to fire the fourth torpedo (No. 10 tube) due to non-retraction of gyro spindle. Investigation after firing revealed that gyro angles recorded at the gyro angle setter (after torpedo room) lagged the gyro angles recorded at the TDC from 5 to 7 degrees, causing torpedoes to miss astern, and that number 10 tube gyro spindle sleeve was frozen in its housing.

Tube Fired	No. 7	No. 8	No. 9	*No. 10
Track Angle (G)	95½ S	97½ S	101½ S	
Gyro Angle (G) #	8 R	10 R	14 R	
Track Angle (A)	88½ S	92½ S	98½ S	
Gyro Angle (A) #	1 R	5 R	11 R	
Depth Set	8	10	8	
Power	High	High	High	
Hit or Miss	Miss	Miss	Miss	
Erratic	No	No	No	
Mk. Torpedo	14-3A	14-3A	14-3A	
Serial No.	23734	24504	24447	
Mk. Exploder	6-4	6-4	6-4	
Serial No.	6994	7516	7627	
Actuation Set	Contact	Contact	Contact	
Mk. Warhead	16	16	16	
Serial No.	2510	1186	795	
Explosive	TPX	TPX	TPX	
Firing Interval	--	7	11	
Type Spread	0	1 3/4 L	1 3/4 R	

Sea Conditions Calm - Flat

Overhaul Activity - Subiaco

Remarks: #(G) - Generated at TDC

#(A) - Actually set on gyros.

*No. 10 tube could not be fired.

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GUN ATTACK REPORT

U.S.S. COD (SS224) Gun Attack No. 1 Patrol No. 2

Time 1825 (H) Date 16 February 1944 Lat. 12-38 N.
Long. 117-33 E.

Target Data - Damage Inflicted

Damaged or Probably Sunk - Power-driven sampan of about 30 tons. Sighted on traffic lane north of Dangerous Ground about 160 miles from nearest land. Identified as Japanese by characters painted on bow and Japanese flag painted on side of deckhouse. Saw sampan on fire, deckhouse and portions of hull blown off and hull riddled with 4" and 20 MM hits. Crew (about 7) jumped over side and not sighted after dark.

Details of Action

Sampan when first sighted tried to run away. Upon being closed, it apparently opened fire with small arms. Expended 20 rounds 4"-50 caliber ammunition and 200 rounds 20 MM ammunition at ranges 2000-800 yards. Training gun and 20 MM crews required excess expenditure ammunition. About 4 4"-50 caliber and numerous 20 MM hits were made.

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(I) MINES

No mines were encountered, during an intensive two hour circular search in poor visibility for the channel buoy and/or escort, off the entrance to Port Darwin swept channel on 4 March 1944.

(J) ANTISUBMARINE MEASURES AND EVASIVE TACTICS

The Terutsuki type destroyer is the most efficient anti-submarine vessel which I hope to encounter. It doesn't waste any time getting to submarine's firing position, carries large depth charges and drops them close, after which echo ranging is employed intermittently between periods of slowing to listen for the rattle of loose deck plates and planking. Louder rattles would be produced if the initial barrages consisted of 6 or 8 instead of 3 depth charges. Echo ranging from this DD was detected at a range of 14 miles.

In the vicinity of Buton Strait a loud buzzing sound usually associated with a magnetic sweep wire was heard at 10-15 minute intervals about two hours after an attack.

An SC escort encountered 23 February echo ranged during both daylight and dark. He passed at a range of 1700 yards without detecting us, and his echo ranging (heard at 12,000 yards) aided in locating convoy during periods of low visibility and poor radar performance.

(K) MAJOR DEFECTS AND DAMAGE

Main Engines:

In contrast to the numerous casualties and defective operation during the last patrol, the performance of the main engines during this patrol and the results obtained have been most gratifying. During the entire patrol no repair work has been necessary and the engineering plant has delivered all that has been required including full power during emergencies. The Commanding Officer considers that a large measure of credit for these results belongs to Submarine Repair Unit #137 and Number One Relief Crew (Submarine Division 162) both for an excellent over-haul and the sound instruction and valuable information regarding operating procedure given to the engineer force of this ship.

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

Rudder:

Rumbles and groans at deep depths, seriously impairing ability of ship to run silent. Work done on this gear during last refit apparently remedied this defect for about three-quarters of the patrol.

After Gyro Setting Regulator:

During attempted war shots from the after tubes on 29 February, the gyro regulator (automatic) overload switch cut out, and when the regulator was shifted to hand power, increasing difficulty was encountered in matching gyros. Firing interval had to be progressively increased before each shot in order to obtain the "gyro matched" light. Upon attempting to fire the fourth torpedo (from number 10 tube) the gyro spindle did not retract and tube could not be fired. Investigation revealed the gyro spindle sleeve (no. 10 tube) to be bound in its housing in such a manner that altho the spindle sleeve could, with difficulty, be rotated within its housing thus allowing gyro angles to be set, it was impossible for the sleeve to be moved in a horizontal direction thereby preventing the retraction of the gyro spindle. During the previous evening's routine of this tube, it was noted that the gyro spindle engaged and disengaged by hand with slightly more stiffness than usual, whereupon the spindle was greased and operated repeatedly by hand until sluggishness and stiffness were eliminated. It is believed that this initial sluggishness in operation was due to the presence of dirt or foreign particles between spindle sleeve and housing, and that the repeated operation of the spindle sleeve at this time caused small burrs to be formed on the sleeve or its housing. This condition was aggravated, during subsequent rotation of the spindle sleeve while forcibly matching gyros, to such an extent as to prevent the spindle sleeve from moving in a horizontal plane and retracting the spindle. Examination of binding grooves and rotary burrs found on the spindle sleeve and its housing appears to verify this explanation. After firing, a discrepancy of 5-7 degrees was noted between gyro angles recorded at the TDC and those recorded at the gyro setter regulator. This discrepancy can only be accounted for as a personnel failure, in that the "gyro matched" signal was given when gyro pointers were not actually matched. A cross-check has been incorporated into the routine procedure for matching gyros by hand which will prevent a reoccurrence of this personnel failure.

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(L) RADIO

Radio reception was satisfactory during the patrol. Some difficulty was experienced while in the vicinity of the Indo-China Coast. Jamming, in the form of howlers and keying modulated and unmodulated CW, was more or less continuous on Baker schedules, but never serious on Nerk frequencies. All serials were received. Three of the four transmissions were received for by VIXØ, the other, transmitted from a position 30 miles south of Buru Island, was received for by VHJ at 2040 (H), 1 March, after an unsuccessful attempt to deliver it to VIXØ. As a matter of interest, at 0100 (H), 1 March while within 60 miles of Darwin, we heard perfectly, a three-way communication via MN among Rasher, Sutton, and Puffer, then operating some 1200-1400 miles distant, whereas in the South China Sea, difficulty was experienced establishing communication with the Billfish, at a range of 6000 yards.

(M) RADAR

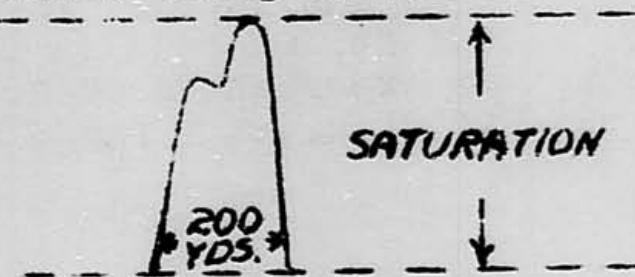
The SD radar exhibited symptoms of poor performance, a few days after the start of patrol, functioned erratically until 18 February when, after an aircraft bombing, it quit entirely. At present, the antenna is shorted, probably as a result of shock since no leakage can be located, and will have to be renewed. Prior to complete failure of the antenna the following troubles were located and remedied: Double pulsing and sparking of the transmitter due to excessive filament voltage on 8014A tubes and misalignment of the transmitter. (Diplexor adjustment found to be 7 inches from its proper operating position.) Resistor R103 was missing from the pulsing circuit and the bottom ceramic antenna insulator was cracked. Antenna reading to ground gradually dropped to 1.5 megohms with intermittent higher readings when dried out over night with a portable blower. During last patrol of this ship, the performance of the SD radar was excellent.

SJ radar operation was fair but unreliable. Shorted leads, dirty contacts, and misalignment of the transmitter caused most difficulties. Condensation forming in the antenna tube during a period of silent running resulted in erratic performance for several hours after surfacing.

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(M) RADAR (CONT.)

Radar interference encountered on the SJ during the night 22-23 February was difficult to distinguish from that caused by other SJ sets. This interference occurred every 20 seconds and the number of pulses on the screen varied from one to several hundred, the pulses always moving from right to left. It seemed possible to obtain approximate bearings on this interference, and indications that the other radar had interference from our set was noted when it evidently was shifted to hand and the sweep would remain steady for periods up to a minute. The gain was reduced so that a pulse appeared on precision sweep as shown:



A plot of the track of this interference indicated widely varying courses & speeds 100-120 knots. The nearest U.S. Submarine at this time was distant approximately 200 miles.

The ARC was used during the patrol while SD antenna was functioning but gave no indications of the presence of enemy radar.

(N) SOUND GEAR AND SOUND CONDITIONS

All sound equipment performed satisfactorily.

In shallow water along the China Coast sound conditions were fair. In this locality the JP sonic equipment was far superior to the supersonic gear, propellers being heard at 8000 yards when no results were being obtained with JK-QC equipment.

North of Halmahera Island, sound conditions were exceptional, propeller turn counts being obtained with both sonic and supersonic equipment at 10,000 yards, and propeller noises tracked to 20,000 yards.

Along the coast of Halmahera Island propeller turn counts were obtained at 4,000 yards.

East of the eastern entrance to Buton Strait, sound conditions were good, echo ranging being detected at a distance of 14 miles, and turn count obtained at 10,000 yards.

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(O) DENSITY LAYERS

Typical density layers in operational areas are tabulated below; no marked change was noticeable during any one day:

Date:Location	Lat.	Long.	Layer Limits Ft.,:Limits	Temp.	Amt.
1/28: Indo-China	13-50 N.	109-30 E	Isothermal: --		0
	: Coast	:	:	:	:
2/8 :South China	12-00 N	113-00 E	190-250	81-73	8500
	: Sea	:	:	:	:
2/24: North of	3-36 N.	128-06 E	180-205	82-80	0
	: Halmahera	:	:	:	:
	: Island	:	:	:	:
2/26: West Coast	1-42 N.	127-30 E	240-280	83-81	0
	: Halmahera	:	:	:	:
2/28: Molukka	1-18 N.	126-40 E	100-170	86-82	Iso-
	: Passage	:	:	:	:ball-
	:	:	:	:	:ast
2/29: East of	3-53 N.	124-50 E	280-290	86-85	0
	: Buton Pass	:	:	:	:

(P) HEALTH, FOOD AND HABITABILITY

Health of personnel was good with the exception of the period 28-30 January when about ninety percent of the officers and crew were ill from the effects of carbon tetrachloride fumes. In some cases the illness lasted for 5 days. Shortly before surfacing on 28 January after an all day dive, various members of the crew complained of headaches, nausea, and dizziness. CO₂ reading was taken and showed 1.5% CO₂. Carbon dioxide absorbent had been in use since submerging. Since this was the first all day dive in several days, it was felt that this might account for the headaches, and nausea, but after inspection, a partially used and improperly sealed 5 gallon can of carbon tetrachloride was found. Since investigation of the food and water consumed during previous two days caused no suspicion, it is presumed that lack of oxygen and the fumes given off by the carbon tetrachloride was the reason for these illnesses. Upon surfacing about half the officers

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(P) HEALTH, FOOD, AND HABITABILITY (CONT.)

and crew was nauseated and many started to vomit. An hour after surfacing practically the entire crew exhibited some or all of the following symptoms: cramps, dizziness, nausea, vomiting, weak pulse, and subnormal temperature. Approximately half the crew recovered during the night's surface operations and the remainder during the next two days. Proper measures have been taken to prevent a reoccurrence of this condition.

Habitability, except during this period, was excellent. CO₂ absorbent was used during most of the all day dives. The use of oxygen after a period of silent running helps.

Food was satisfactory in quantity and quality and well prepared.

(Q) PERSONNEL

Officers and men performed their duties to the best of their abilities and in keeping with the traditions of the service.

(R) MILES STEAMED - FUEL USED

Fremantle to Barrier	1868 Miles	20900 Gallons
North of Barrier	7836 Miles	67364 Gallons
Barrier to Fremantle (Via Darwin and Scouting Line)	2868 Miles	39960 Gallons

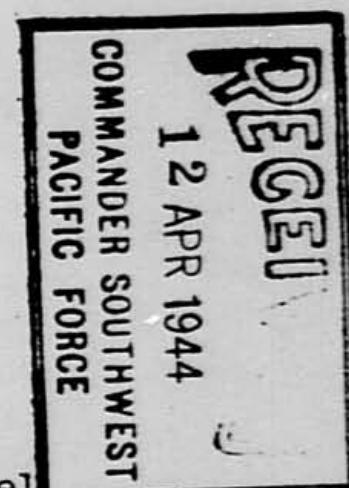
(S) DURATION

Days enroute to area (Barrier)	7
Days North of Barrier	45
Days Enroute to Frerantle (Via Darwin and Scouting Line)	11
Days Submerged	25

(T) FACTORS OF ENDURANCE REMAINING

Torpedoes	Fuel	Provisions	Personnel Factor
7	8600	10	10

(Arrival Darwin)
Limiting Factor This Patrol:
Provisions, OpOrd.



FC5-16/416-3
Serial 0167

SUBMARINE SQUADRON SIXTEEN

C-O-N-F-I-D-E-N-T-I-A-L

U.S.S. RASHER, Flagship,
24 March 1944.

FIRST ENDORSEMENT to
USS COD - Report of
2nd War Patrol.

From: The Commander Submarine Squadron SIXTEEN.
To : The Commander in Chief, UNITED STATES FLEET.
Via : The Commander Submarines, SEVENTH FLEET.
The Commander SEVENTH FLEET.
Subject: U.S.S. COD (SS224) - Report of SECOND War Patrol -
Comment on.

1. The second war patrol of the COD covered a period of sixty-three days of which forty-five days were spent in enemy waters north of the BARRIER.

2. Good area coverage was maintained. Five contacts worthy of torpedoes were made and four of these were attacked, two successfully.

ATTACK #1 was a submerged daylight periscope sighting. A favorable attack position could not be reached so target was trailed and chased on the surface and a night attack was made submerged by periscope in bright moonlight. A spread of four torpedoes was fired and all missed. No torpedo explosions were heard at end of run although the depth of water ranged between twenty to twelve fathoms.

ATTACK #2 and #3 - were surface radar attacks and both resulted in the sinking of an enemy ship.

ATTACK #4 - missed due to gyros not being matched.

3. The outbreak of illness as described clearly indicates it had its origin in the CCl₄ fumes saturating the air. Saturation point was in all probability such so as not to bring about more serious effects and the rapid recoveries indicate that the degree of poisoning was not sufficient to bring about any serious complications. Steps have been taken by the COD to prevent the recurrence of this casualty.

4. The COD returned in excellent material condition and will be refitted in the normal time. It is gratifying to note the favorable comment on page 39, concerning the last refit of the main engines by Submarine Repair Unit, Navy 137, and by #1 Relief Crew of Submarine Division 162.

5. The Squadron Commander congratulates the Commanding Officer, officers and crew on the completion of their second war patrol, and on the damage inflicted upon the enemy.

H. H. McLEAN.

TK24-71/A16-3

UNITED STATES NAVY

12/fg

Serial: 0306

4 April 1944.

C-O-N-F-I-D-E-N-T-I-A-L

SECOND ENDORSEMENT to:
U.S.S. COD Confr. Ltr. A16-3
Serial 0167, dated 24
March, 1944. Report of
2nd War Patrol.

From: The Commander Submarines, SEVENTH FLEET.
To : The Commander in Chief, UNITED STATES FLEET.
Via : The Commander SEVENTH FLEET.
Subject: U.S.S. COD (SS224) - Report of Second War Patrol -
Comment on.

1. The remarks of the Commander Submarine Squadron
SIXTEEN are concurred in.

2. The fact that ninety percent of the officers and crew were suffering from CCL₄ poisoning on 29 and 30 January, undoubtedly was, in a great measure, responsible for the failure to develop an attack on the important convoy encountered. The Commanding Officer's determination to inflict damage on the enemy and seek such opportunity to the limit of endurance was rewarded with the sinking of an important XAO and an AK at a later date.

3. This patrol is designated as successful for purpose of award of the Submarine Combat Insignia.

4. The Force Commander congratulates the Commanding Officer, Officers and Crew on this patrol in which the following damage was inflicted on the enemy:

SUNK

1 - XAO (#3 OGURA MARU) - - - - - 7,350 Tons

1 - AK (TAIKSOKU MARU) - - - - - 2,473 "

*1 - SAMPAN - - - - - - - - - 30 "

Total 9,853 Tons

*Sunk by gunfire.

R. W. CHRISTIE.

FE24-71/A16-3

UNITED STATES NAVY

12/fg

Serial: 0306

4 April 1944.

C-O-N-F-I-D-E-N-T-I-A-L

Subject: U.S.S. COD (SS224) - Report of Second War Patrol -
Comment on,

DISTRIBUTION:

Cominch	(8)	- (Direct)
Vice Opnav	(2)	- (Direct)
Vice Opnav Op-23c	(1)	
Com1stFlt	(1)	ComSubRon-12 (1)
Com2ndFlt	(1)	DivComs-Ron-12 (1)
Com3rdFlt	(1)	
Com7thFlt	(2)	
ComsubalstFlt	(4)	
Comsubs2ndFlt	(4)	
CTF-71	(4)	
CTF-72	(2)	
CSS-16	(1)	
DivComs-Ron-16	(1)	
S/M School, N.L. Conn	(2)	
Each S/M W.A.	(1)	- <u>NOT TO BE TAKEN TO SEA - BURN</u>

P. F. Straub
P. F. STRAUB, Jr.,
Flag Secretary.

UNITED STATES FLEET
COMMANDER SEVENTH FLEET

Reg. No.

2F47

018175

R.S. No.

A16-3/(F-6/cw)

Serial: 0868

844

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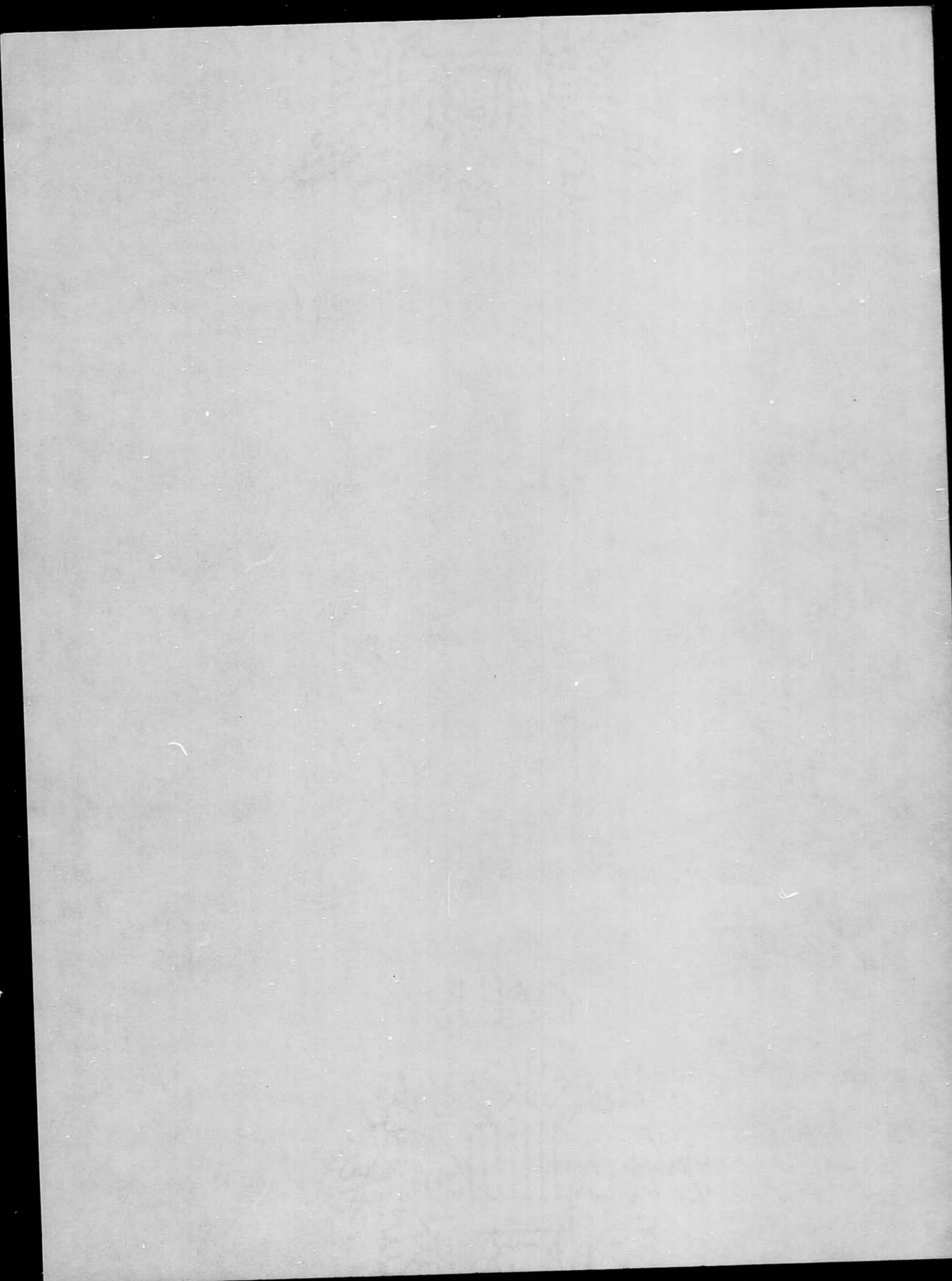
18 APR 1944

THIRD ENDORSEMENT to:
CO USS COD (SS224) Conf.
Ltr. Serial 01 dated
13 March 1944.

From: The Commander SEVENTH FLEET.
To : The Commander in Chief, United States Fleet.
Subject: USS COD - Report of Second War Patrol.

1. Forwarded.

R. H. Cruzen
R. H. CRUZEN,
By direction.



SS224/A16-3
Serial (02)

U.S.S. COD (SS224)
c/o Fleet Post Office,
San Francisco, California

132 copy

1 June 1944

~~DECLASSIFIED~~

From: The Commanding Officer.
To: The Commander in Chief, United States Fleet.
Via: (Official Channels).

Subject: U.S.S. COD (SS224) - Report of War
Patrol Number Three.

Enclosure: (A) Subject Report.

1. Enclosure (A) covering the third war patrol of this vessel conducted in the Sulu Sea and in the South China Sea off the coast of Luzon covering the period 6 April to 1 June 1944 is forwarded herewith.

J. C. DEMPSEY.

~~DECLASSIFIED~~

DECLASSIFIED-ART. 0445, OPNAVINST 5510.1C
BY OP-09 RGC DATE 5/25/72

79924

FILMED

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(A) PROLOGUE

Arrived Fremantle, W.A. on 13 March 1944 from Second War Patrol. Refit accomplished by Relief Crew Number One (SubDiv 162) and Submarine Repair Unit #137. The following items of major importance accomplished:

- (1) P.P.I. Radar installed.
- (2) Bridge superstructure altered to reduce silhouette and improve visibility.
- (3) Overhauled 2 main engines and renewed exhaust mufflers.
- (4) Docked and repainted.

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(B) NARRATIVE (ALL TIMES HOW)

6 April 1944

- 1315 Underway in accordance ComTaskFor Seventy-One OpOrd No. 40-44 to conduct unrestricted submarine warfare in the South China Sea between latitudes 14 and 17° N., and from the coast of Luzon to longitude 115° E. Orders specified the exploitation of traffic lanes and focal points enroute to and from areas, particularly along the West Coast of Mindanao.
- 1710 Commenced training exercises with U.S.S. Isabel.
- 2230 Completed exercises and departed for patrol area via Darwin. Accompanied U.S.S. Jack along bombing restriction lane for purposes mutual training.

7-8 April 1944

Enroute Darwin in company U.S.S. Jack. During day and night conducted training with U.S.S. Jack, each ship alternating as target. Practiced surface and submerged approaches, trained gun crews, sound and radar operators. All look-outs had numerous opportunities to observe periscope and submarine at various ranges under varying conditions of visibility. Also, with Jack available, a means was afforded to tune and adjust SJ radar. The training afforded to submarines, proceeding in company, is considered very valuable.

9 April 1944

- 0130 Parted company with U.S.S. Jack and proceeded via assigned routing to Darwin.
- 1049 Sighted friendly submarine southbound, bearing 290 (T) distant 10 miles. Own Posit Lat. 20-01.2 S.; Long. 113-09 E.) Presumed to be U.S.S. Bluefish.

10-12 April 1944

Enroute Darwin conducting routine drills and exercises. During this period SJ radar became inoperative due faulty range unit. Transmitted Cod dispatch number one requesting delivery required parts upon arrival Darwin.

13 April 1944

- 0712 Contacted escort and proceeded Darwin. Transferred one rating to Naval Dispensary, Darwin for treatment. Fueled and made minor repairs.

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13 April 1944 (Cont.)

- 1600 Received requested SJ radar parts from PBY.
1945 Completed repairs to radar.
2000 Departed Darwin enroute patrol area, via assigned routing.

14 April 1944

- 0514 Submerged for trim.
0600 Surfaced. Decided not to use SJ radar when within 100 miles of land.
1102 Submerged for B-25 bomber sighted at 7 miles on northwesterly course. Remained submerged to work on SJ radar and to repair stern plane contactors.
1645 Surfaced and proceeded, via Sermata pass. SJ radar out of commission.

15 April 1944

- 0521 Submerged about 10 miles northeast of Sermata Island to train planesmen, check repacked cables and hull plugs, and to determine whether or not SJ radar could be made operative before we proceeded too far from Darwin.
1745 Surfaced and proceeded focal point enemy traffic vicinity Gunung Api to tune and check radar.

16 April 1944

- 0200 Completed work on SJ and set course to exploit traffic vicinity Moro Maha Island.
1115 In Lat. 06-27 S.; Long. 124-53 E.; sighted what appeared to be periscope on starboard beam, range 1500-2000 yards. Maneuvered to avoid, and at
1121 Submerged and continued westward conducting patrol off Moro Maha Island.
1817 Surfaced and patrolled across western entrance Buton Passage and Buton Strait.

17 April 1944

- 0237 In Lat. 05-57 S.; Long. 122-48 E.; made radar contact bearing 302 (T), range 4950 yards. Identified as sailboat and avoided.
0540 Submerged for patrol across western entrances Buton Strait.
1448 Sighted sailboat bearing 248 (T), distance 7 miles. (Lat. 05-35 S.; Lng. 122-04 E.) Closed and identified as native craft on southeasterly course.

CONFIDENTIAL

17 April 1944 (Cont.)

1827 Surfaced and patrolled across traffic lanes between Saleier and Tioro Straits until midnight when en course for Saleier Passage. Made two contacts during night on sailboats.

18 April 1944

Transited Saleier Passage and at
0554 Submerged for patrol across western entrance. Sighted nothing except native sailboats on southeasterly courses.
1824 Surfaced and proceeded on northwesterly course patrolling across southwesterly entrances to Makassar City.

19 April 1944

0114 In Lat. 05-29 S.; Long. 118-42 E., made radar contact bearing 312 (T), range 9000 yards. Tracked on course 100 (T), at speed 6 knots. Stopped and tracked with sound at ranges 8,000 - 10,000 yards, light high speed screws making 150 rpm. Identified as small subchaser (Contact #1) apparently patrolling between Dewakang Bejar and southwest entrance Makassar City. Waited until small craft had opened range to eastward then proceeded northward.
0155 With Bankauluang Island bearing 330 (T), distant 3 miles, noticed much signalling from that island, and again picked up small craft closing range. Evaded on surface by passing south of Dewakang Kechil, and proceeding north between this island and Doang Doanggang Besar. Between 0300 and 0500 passed 5 sailboats contacted at radar ranges 1500 to 7000 yards. Avoided by course changes.
0524 With 6 sailboats in sight, submerged in position 5 miles east of Marasindeh Island. Identified sailboats as apparently native craft all on southerly or southeasterly courses.
1219 In position about 10 miles north of Marasindeh Island sighted what appeared to be smoke bearing 136 (T), and commenced closing. (Contact #2)
1329 Sighted float type plane (A/C Contact #1) bearing 170 (T), distant 8-10 miles, on various courses either patrolling area or escorting.
1340 Tracked smoke on westerly course at speeds 8-9 knots, apparently passing across the shallow bank south of Doang Doanggang Besar Island.

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19 April 1944 (Cont.)

- 1356 Sound picked up long scale echo-ranging in direction of smoke. Could not sight masts of ship altho visibility was excellent. Plane still in sight in vicinity of smoke.
- 1425 Plane altered course toward submarine, passing at distance of about 6 miles.
- 1433 Echo-ranging faded out on bearing of smoke. Decided to open range, surface, pass north of Butong Botongang Island and intercept target vicinity Luna Islands. Plane and smoke remained in sight until 1625 when they disappeared on bearing 220 (T).
- 1705 Sighted what appeared to be sailboat or sub-chaser bearing 096 (T) range about 8000 yards. Identified object as semi-submerged wreckage.
- 1745 Surfaced and commenced rounding shallows north and west of Butong Butongang Island.
- 1840 In Lat. 04-45 S.; Long. 117-40 E., ran into extensive area of submerged wreckage which included parts of ship, huge logs and debris. Pit-log swordarm bent and torpedo shutters received severe banging. Maneuvered for 30 minutes trying to clear debris without injuring propellers. Checked shutters apparently okay. Continued to northwest in unsuccessful effort to contact target. Since masts of target were not sighted at an estimated range of 14,000 yards, contact may have been a small escort maru or subchaser searching area, thru which we had passed.
- 2018 2200 Abandoned search and proceeded up Makassar Strait.

20 April 1944

- In vicinity of Cape Mandar made 3 radar contacts at ranges 3000-4000, apparently sailboats which were avoided by course changes.
- 0550 Submerged about 15 miles southwest of Cape William. Numerous sailboats in sight throughout day.
- 0826 Sighted float type plane (A/C Contact #2) bearing 052 (T), distant 8 miles apparently patrolling, on southwesterly course.
- 1844 Surfaced and followed traffic lanes enroute Sibutu Passage. Sighted and avoided 2 sailboats northwest of Cape William.
- 2110 Decoded CTF 71 dispatch assigning new area.

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21 April 1944

- Surfaced and submerged patrol in Makassar Strait on traffic lanes leading to Koetei River Delta.
- 0535 Submerged upon sighting mast bearing 347 (T), range 16,000 yards, and commenced approach.
- 0609 Identified mast as sailboat. Investigated submerged and appeared to be typical native craft.
- 0947 Sighted float type plane bearing 315 (T), distant 9 miles on southeasterly course (A/C Contact #3), apparently patrolling area since no traffic sighted.
- 1130 Conducted one hour submerged approach on what appeared to be masts of 2 ships and proved to be wreckage.
- 1837 Surfaced.

22 April 1944

- Surface patrol across traffic lanes Davao to Makassar Strait and Tarakan.
- 1205 Submerged to be in position for night transit Sibutu.
- 1828 Surfaced and proceeded Sibutu Passage.
- 2130 Commenced transit at 17 knots.
- 2309 In posit Lat. 04-57.5 N.; Long. 119-34 E., made radar contact with small sailboat or motor launch bearing 259 (T) range 4000 yards. Avoided by course change.
- 2350 Completed transit Sibutu Passage and slowed to 14 knots.

23 April 1944

- Proceeding west of Pearl Bank, at
- 0031 In posit Lat. 05-23 N.; Long. 119-35.5 E., made radar contact with small unidentified object bearing 011 (T), range 1200 yards. Avoided.
- 0545 Submerged for patrol across entrances east of Pearl Bank and Pangutaran Passage. Submerged patrol conducted because of glassy water surface and overcast skies.
- 1830 Surfaced and proceeded to Zamboanga Coast patrolling traffic focal point vicinity Lat. 08-10 N.; Long. 121-30 E.

24 April 1944

- Patrolled focal point of approaches to Sibutu Passage, Basilan Strait and Balabac Strait until 0200 when closed coast in vicinity Dulunguin Point, Zamboanga Peninsula.

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24 April 1944 (Cont.)

- 0512 Submerged 6 miles northwest Dulunguin Point, closed coast and patrolled to southward, 2 miles off beach, investigating Port Santa Maria, Siokun and Panabutan Bays enroute. Sighted nothing but one native sailboat on northerly course in vicinity Balatacan Point.
- 1847 Surfaced and patrolled 6 miles off coast between Botorampen and Dulunguin Points, estimating this procedure would cover most effectively night traffic lanes to and from Basilan Strait. High forest fires visible in mountains east of Linasun Point.

25 April 1944

- 0010 In Lat. 07-32.5 N.; Long. 121-58.3 E., made radar contact on two small pips, bearing 144 (T), range 8,000 yards. Tracked on northerly course at slow speeds. Identified as sailing craft.
- 0140 Opened coast to cover northwesterly approaches Basilan Strait.
- 0311 Lat. 07-14.4 N.; Long. 121-42 E., made radar contact bearing 240 (T), range 13,350 yards. Tracked target on course 160-210 (T) at speed 15-16 knots, and attempted gain position ahead. (Contact #3).
- 0400 Sighted smoke of target bearing 220 (T), range 16,000 yards.
- 0415 Sighted smoke of target bearing 242 (T), range 14,000 yards.
- 0417 Radar contact bearing 254 (T), range 10,000 yards on what appeared to be escort.
- 0423 Dawn starting to break and target's position and course such that destination might be either Basilan Strait or one of the passages thru the reefs north of Sulu Archipelago. Since attack position could be reached only if target entered Basilan Strait, opened range to southeast and at
- 0500 Submerged about 2 miles northeast of the reef around Teinga Island, just west of Basilan Strait. Did not again sight nor hear target which apparently made a landfall on Teinga Island and altered course to the southwest. Target not identified but it was apparently medium sized and high speed, having been detected at 18,000 yards radar range and tracked at 16 knots.
- 0520 Altered course to northwest to keep from being swept into shoal water of Basilan Strait.

CONFIDENTIAL

25 April 1944 (Cont.)

- 0530 Patrolled western entrance Basilan Strait in glassy sea.
1841 Surfaced and patrolled vicinity Lat. 7-10 N.; Long. 121-40 E.

26 April 1944

- 0100 Altered course to patrol along reverse track of target sighted previous night, until 0300 when closed coast.
0500 Submerged for patrol off Dulunguin Point. Sighted 2 native sailboats during day.
1847 Surfaced and patrolled south and southeast from enemy focal point along traffic lanes to Basilan Strait and Sulu Archipelago. Passed thru much floating debris during night.

27 April 1944

- 0523 Submerged for patrol across northwestern approaches Basilan Strait.
1840 Surfaced and patrolled across approaches Basilan Strait until 2300 when set course to patrol northward along coast.

28 April 1944

- 0510 Submerged for patrol 6 miles NW of Coronado Point and closed coast. Slight chop on water and a few white caps, the first suitable periscope conditions noticed in this area.
1000 In Lat. 07-56 N.; Long. 122-08.5 E., sighted type "Oscar" plane, bearing 235 (T), distant 1 mile, altitude 500 feet, on course 225 (T) at high speed. (A/C Contact #4)
1035 Sighted northbound native sailboat bearing 124 (T), distant about 4 miles, well inshore in Coronado Bay.
1224 While on course 180 (T), in position Lat. 07-51.8 N.; Long. 122-05.8 E., sighted single mast of ship bearing 047 (T) distant about 8 miles, which placed the ship about 1 mile off Coronado Point. Tracked on course 215 (T) speed 7 knots. (Contact #4).
1248 Sighted mast of second ship bearing 045 (T), inshore of first ship and 3 miles astern, on course 215 (T), speed 6-7 knots. (Contact #5) Paralled coast about 1½ miles off shore and tracked targets.
1255 Identified first target as minesweeper similar class AM 1-6 (ONI 41-42), steering various courses so as to stay just inside the 100 fathom curve and echo-ranging on 18 kcs. at 8 second intervals. His speed varied from 6 to 7 knots.

CONFIDENTIAL

28 April 1944 (Cont.)

- 1255 Crews manned the rails and tops apparently acting as A/S lookouts. Let the AM pass at range of 1600 yards while taking position on second target. Could not see sweep wires altho other actions indicated minesweeping operations.
- 1310 Identified second target as small PC boat similar to class PC3-39 (ONI 41-42) except that stack appeared to be thicker and a stick mainmast was installed, from which the Japanese ensign could be distinguished. This PC boat followed contour of coast about $\frac{1}{2}$ mile off-shore and may have been mine-sweeping. Did not attack since the whole set-up appeared to be fore-runner of valuable traffic, expected thru this area. Maintained patrol 1 $\frac{1}{2}$ to 2 miles off-shore between Dulunguin and Sampoak Point's until
- 1851 Surfaced about 5 miles west of Dulunguin Point. Patrolled to west and south along traffic lanes then north along coast to be in position for possible enemy activity this area.

29 April 1944

- 0451 Submerged 4 miles west of Port Santa Maria and patrolled north and south about 2 miles off Sampoak Point.
- 1333 Sighted small sea truck escorted by trawler bearing 046 (T), range 12,000 yards on southerly courses conforming to coast line at speed 8 knots. In view possible enemy warship activity this area, did not desire disclose position. (Contact #6)
- 1846 Surfaced and patrolled to northwest to cover possible enemy traffic enroute Sulu Archipelago until 2330 when closed coast north of Coronado Point.
- 2354 Fire in maneuvering room due faulty main motor contactor resulting in overheated starting resistor. Casualty repaired in 10 minutes with little damage.

30 April 1944

- 0518 Submerged north of Coronado Point to check on possible enemy activity this vicinity. Completed repairs to main motor contactors during day.
- 1709 Sighted trawler and sea truck (same as contact 6) with an additional small trawler on north-easterly course hugging beach in vicinity Bakong Point, range about 14,000 yards.

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30 April 1944 (Cont.)

1901 Surfaced and patrolled across western entrance Mindanao Sea.

1 May 1944

0504 Submerged for patrol off Siaton Point, Negros.

1332 Sighted stick masts of ship bearing 104 (T), range about 25,000 yards on northeasterly course at speed 10-14 knots. (Contact 7) Ship drew out of sight passing between Apo Island and Negros mainland.

1842 Surfaced and patrolled enroute Coronado Point.

2 May 1944

0215 Decoded dispatch orders assigning new area. In view possible enemy activity decided search area north of Tubbataha Reefs until dark 3 May. Submerged while crossing traffic lanes vicinity Arena Island. At dusk commenced search possible enemy position west of a line between Dumaran Island and Tubbataha Reef.

3 May 1944

0528 Submerged in desired position west of Tubbataha Reefs.

1349 Surfaced and conducted high periscope lookout.

1414 Submerged on closing aircraft radar contact. (A/C Contact #5). No traffic sighted in good visibility. Maintained submerged patrol but sighted nothing.

1835 Surfaced and proceeded assigned area via Cuyo East Pass.

4 May 1944

Surfaced and submerged patrol enroute area via Cuyo East and Apo West Passes.

5 May 1944

During daylight conducted submerged patrol across western entrance Mindoro Strait and across traffic lanes from Cape Calavite to Linapacan Strait. Upon surfacing patrolled across traffic lanes enroute focal point vicinity Scarborough Shoal.

6 May 1944

Surface patrol vicinity Scarborough Shoal to Cape Bolinao.

7 May 1944

Patrolled across traffic lanes between Cape Bolinao and Caiman Point. During early morning sighted 3-4 native fishing craft, apparently using kerosene flares.

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7 May 1944 (Cont.)

- 0500 Submerged 4 miles west of Agno Bay and patrolled along coast between Agno Bay and Tambobo Point which is estimated daylight position of possible enemy activity.
- 0550 Commenced approach upon sighting 3 small craft bearing 039 (T) range 8000 yards (Contact #8) on southerly courses conforming to coast line at speed 6-8 knots. Broke off approach upon identifying craft as similar to an ex-whale "Killer boat", a coastal minesweeper of about 200 tons and a small PC boat, in triangular formation and apparently not sweeping. Sighted several native fishing and sailing craft during day.
- 1859 Surfaced and proceeded south to cover entrance of enemy shipping into Manila and to take position for possible enemy activity southwest of Cape Calavite.

8 May 1944

- 0600 Arrived desired position and commenced surface patrol.
- 0630 Submerged for A/C radar contact at 11 miles closing. (A/C Contact #6) Commenced submerged patrol across estimated traffic lane.
- 0700 Sighted plane (unidentified) bearing 340 (T), distant 12 miles at high altitude on a southerly course. (A/C Contact #7)
- 1150 Sighted 2-engine bomber, land based type bearing 185 (T), distant 5 miles on southwesterly course (A/C Contact #8).
- 1910 Surfaced and patrolled traffic lanes leading to Cape Calavite until 2330 when decoded Hoe dispatch reporting southbound convoy. Increased speed to 17 knots to attain convoy's estimated dawn posit about 12 miles west of Capones Island.

9 May 1944

- 0445 Submerged 12 miles west of Capones Island light.
- 0512 While returning to periscope depth from 300 feet sound reported fast screws (300 rpm) on constant bearing 200 (T). Reached periscope depth about one minute later and sighted a mine layer similar in all respects to the Okinoshima (CM6) (ONI 41-42) bearing 220 (T), range 6000 yards zigging widely on base course 300 (T) at estimated speed of 20 knots. (Contact #9) While swinging for bow tube shot,

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9 May 1944 (Cont.)

- 0512 target zigged away and passed at minimum range of 5500 yards. One plane was mounted on catapult. Followed target submerged. Upon reaching a position about 5 miles northwest of ours, target commenced circling and maneuvering on widely varying courses at various speeds, for a period of 10 minutes after which it drew out of visible range on bearing 330 (T). Changed course to 330 (T), figuring minelayer would furnish escort for expected incoming convoy.
- 0547 Heard distant depth charging on northwesterly bearing.
- 0650 Sighted type "Rufe" plane (A/C Contact #9) bearing 330 (T), distant 4 miles on various courses apparently scouting area. Plane remained in view until 0710 when it disappeared in a southerly direction.
- 0824 Sound reported echo-ranging bearing approximately 300 (T).
- 0825 Sight float type plane bearing 308 (T), distant 8-10 miles, on southeasterly course. (A/C Contact #10). Changed course to 270 (T) to close.
- 0828 Sighted what appeared to be smoke bearing 279 (T).
- 0841 Sighted 4 float and 1 bomber type planes bearing 290 (T), distant 8-12 miles on various courses apparently covering convoy. (A/C Contact #11) Changed course to 210 (T) to intercept convoy when it made expected course change to southeast.
- 0918 Sighted masts apparently of 3 or more escort ships bearing 270 (T), range about 15,000 yards. Tracked on course 210-170 (T) at speed 12 knots. (Contact #10)
- 0940 Distinguished masts and smoke from 4 or more ships of convoy bearing 250 (T), range about 20,000 - 30,000 yards. Convoy maintained a general southerly course passing 25-30 miles west of Capones Island, and drew out of visible range at 1150 bearing 210 (T). No course change to eastward was noticed. No details of ships of convoy with the exception of the masts of the CM Okinoshima were distinguished.
- 1000 With all ships of convoy hopelessly out of range, changed course to 270 (T) to close track of convoy should there be stragglers. From the action of the CM sighted shortly after submerging, and the air patrol which appears to scout our diving position, it is likely that we were either sighted or detected while approaching the coast in bright moonlight and the convoy routed well around us.

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9 May 1944 (Cont.)

1900 Surfaced and patrolled to northward on reverse track of convoy. Decided patrol off Cape Bolinao in view of possible enemy warship activity this vicinity, and also to have some leeway to get in attack position when a contact is made.

10 May 1944

0159 Latitude 16-15 N.; Longitude 119-14 E., sighted smoke bearing 083 (T), distant 15-16 miles.

Full moon visibility. Closed bearing and at 0212 Made radar contact bearing 092 (T), range 22,000 yards. (Contact #11) Distinguished smoke of many ships while radar had numerous contacts at ranges 22,000 to 30,000 yards. Determined convoy to be zigzagging between courses 140 (T) and 200 (T), at speed 10-11 knots. Legs of zigs appeared to be 6-15 minutes, course being changed from 200 to 140 (T) by zigs of 15-20 degrees and from 140 to 200 (T) in one zig. At

0438 With smoke bearing 010 (T) range about 20,000 yards, submerged and closed track.

0505 Obtained good view of formation. The area to the northeast looked like a forest. Counted masts and smoke of 33 ships which did not include a batch to the eastward of which only their smoke could be sighted. No warships with the exception of minesweepers, Chidoris, and destroyers were sighted. Convoy appeared to be divided into four separate formations each of 2 or 3 columns with 2 or 3 ships in each column. The formations were positioned in each corner of a square separated by a distance of 4000-6000 yards. Interval between columns was about 1400 yards and distance between ships appeared to be 300-500 yards. Destroyers patrolled ahead and on the flanks. Chidori type torpedo boat and minesweepers appeared to be scattered about the interior of the convoy. As far as could be ascertained only the bow and flank destroyer escorts echo-ranged.

0517 Sighted 2 type "Mavis" flying boats patrolling over formation. (A/C Contact #12).

0520 Made approach on near formation of ships which consisted of 5 ships in two columns, 3 ships in near column and 2 in the far. Ships were in line of bearing about 135 (T). One Kamikaze destroyer patrolled ahead, one on the near flank and a Chidori on the near quarter.

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10 May 1944 (Cont.)

- 0520 Masts of either a destroyer or Chidori were noticed on the far flank. Leading ship in far column was an AK-AP of the Brisbane Maru type, followed by a Sanko Maru type AK. Leading the near column was another Sanko Maru type, then a large AK similar to the Asosan Maru with an AP similar to the Kasodo Maru bringing up the rear.
- 0545 With formation on course 140 (T) and near destroyer at range of 3200 yards and 30 degree angle on starboard bow, planned to fire bow tubes on large track angle at target offered by DD and near column of marus.
- 0546 Formation zigged to course 200 (T) and DD presented a 5 degree port angle.
- 0551 Formation zigged to 180 (T). Destroyer still echo-ranging and still with 5 degree port angle, range 1400 yards. Distance to track of near column of ships about 2000 yards. Decided fire stern tubes at destroyer and bow tubes at near formation of ships. Changed course to 095 (T) to increase distance from ID track, and decrease bow tube gyro angles.
- 0555-51 With angle on bow of DD exactly 90 degrees port, and torpedo run of 650 yards, but a large (40 degree) and rapidly increasing gyro angle, fired 3 torpedoes from stern tubes. Watched first torpedo hit right under the bridge after a 26 second run. Both stacks collapsed, and dozens of the crew (in white uniforms) who had been lining the rails acting as periscope lookouts were tossed into the air. The ship immediately started to sag in the middle with bow and stern rising. While swinging around for the set-up on the marus, observed the second torpedo hit abaft the main mast and the whole fantail disintegrate.
- 0556-39 Shifted set-up to last ship (Kasodo Maru type) of near column and fired 2 torpedoes from bow tubes on 105 starboard track with torpedo run 1400 yards and 10 degree gyro, then fired remaining 4 torpedoes at the second ship in near column (Asosan Maru type), with average track angle 113 starboard, torpedo run 1850 yards and 18 degree gyro. At time of firing, this target together with the two ships of the far column (range 3300 yards) were so aligned as to form a three ship target bow to stern. Furnished continuous periscope bearings to TDC for all except last two shots, which were fired on generated bearings. At this time, the near quarter Chidori had a zero

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10 May 1944 (Cont.)

0556-39

angle on the bow at a range of 2000 yards, 2 aircraft bombs had already landed and 3 or 4 of the next formation's escorts were at a range of 4000 yards and closing the firing position at high speed. Started deep. Sound tracked torpedoes. Heard first bow tube torpedo hit first target (Kasado Maru) 56 seconds after firing. Heard 3 torpedo hits on the second target (Asosan Maru type) after runs of 76 seconds, followed by extensive ripping and tearing noises characteristic of ships breaking up. About 2 minutes and 16 seconds after firing last shot, sound reported another torpedo hit which checked with torpedo run on one of the ships in far column. Breaking up noises from marus and destroyer very loud thru the hull.

- 0600 At 300 feet, changed course to 270 (T) and went ahead full to get clear of Chidori who let go a barrage of 3 depth charges. Very loud cracking-up noises and explosions from the torpedoed destroyer extending across both bows, forced a change of course to the northwest. Breaking up noises of torpedoed marus audible thru hull on two distinct bearings.
- 0604 Three aircraft bombs.
- 0605 Series of heavy explosions on bearing of torpedoed marus.
- 0606 Four escorts from the next formation arrived and depth charging started. Changed course to northeast to try to get under part of the convoy. During the next 15 minutes, escorts dropped approximately 70 depth charges in batches of 3 to 8. No echo-ranges heard. Sounded as the escorts were laying down a sort of saturation barrage over an area in the vicinity of our firing position, probably designated by smoke float dropped from plane. Continued at standard speed on northerly courses clearing firing position.
- 0620 Depth charging ceased. Escorts (3 or 4) commenced intermittent pinging, stopping occasionally to listen. Ran silent under 8 degrees negative gradient. During this period heard many sharp firecracker explosions on bearing of torpedoed marus which from previous experience is associated with detonation of an ammunition cargo.

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10 May 1944 (Cont.)

- 0626 Three escorts made runs at intervals of 4-8 to minutes dropping 2 to 3 charges with deep depth settings each run. Two or three barrages very close but did no serious damage. Maneuvered to keep escorts abaft beam. At 0635 heard series of heavy explosions from torpedoed marus.
- 0715 No depth charges. Maneuvered to put intermittent pinging and screw noises astern. Fire-cracker explosions on bearing of torpedoed marus still continuously audible thru hull and over sound gear. Ran silent on northeasterly course. Heavy rattling noise along hull, probable loose deck plating.
- 0940 Three close and heavy depth charges, probably from plane since no screws heard close aboard. Changed course to north and closed all main vents.
- 0957 Three escorts commenced runs dropping them in batches of 1 to 4 at intervals of 3-6 minutes. Continued evasive tactics.
- 1040 Depth charging ceased with escorts gradually drawing astern.
- 1145 Screws faded out, intermittent echo-ranging still audible. Increased speed to try to get to periscope depth without using trim pump.
- 1330 Distant depth charges astern.
- 1340 Periscope depth, about 10 miles from attack position, nothing in sight, checked for damage, reloaded torpedoes and repaired minor damage.
- 1600 Distant depth charging.
- 1845 While preparing to surface, sound reported echo-ranging bearing 259 (T), and closing.
- 1852 Sighted hazy outline of Chidori torpedo boat or PC boat bearing 253 (T) with small angle on bow. (Contact #12) Could not determine range nor angle on bow in visibility prevailing. Chidori appeared to be either weaving or zigzagging on an easterly course, at speeds 6-12 knots. Endeavored to keep Chidori bearing abaft beam while opening distance to track but had to go deep when sound reported screws speeding up and hazy periscope observations indicated a constant bearing. Chidori shifted to short scale pinging and appeared to have sound contact so speeded up to get clear of expected depth charges. Nothing dropped and after a half-hour of pinging in our vicinity, Chidori continued on an easterly course.

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10 May 1944 (Cont.)

- 2050 Surfaced in thunderstorm. Brilliant flashes of lightning with much rain. Patrolled to northwestward intending to exploit traffic lanes vicinity Stewart Bank and Truko Shoal. Slowed at 2300 because of overheated port shaft stern tube packing.
- 2343 Latitude 16-30 N.; Longitude 118-20 E. Made radar and sight contact at 8000 yards, bearing 350 (T) on small patrol craft, which resembled a PC boat or small minelayer (Contact #13). Tracked on course 200 (T) at speed 12 knots. Determined he was not escorting and avoided by course changes.

11 May 1944

- 0514 Submerged in position 16-45 N.; 118-00 E. Continued minor repairs and checking of damage.
- 1917 Surfaced and at
- 2015 Transmitted Cod dispatch two, reporting attack on convoy. Upon completion transmission continued patrol across traffic lanes vicinity Truko Shoal.

12 May 1944

Patrolled eastward from traffic focal point at Lat. 17-00 N.; Long. 117-00 E., to cover tracks of reported southbound task force. Submerged about half this day, routineing torpedoes, repairing pit-log, remedying air leaks and leaky stern tubes.

13 May 1944

Surface and submerged patrol across traffic lanes north and northwest of Cape Bolinao.

14 May 1944

Patrolled across traffic lanes north and northwest of Cape Bolinao until 2230 when changed course to southwest to patrol off-shore traffic lanes.

- 0523 Submerged for trim and B.T. card.
- 0745 In position Lat. 16-24 N.; Long. 118-17 E., upon returning from deep submergence, sighted 100-200 ton trawler (similar in appearance to Japanese sea-truck but having two masts fitted with sails) (Contact #14) bearing 353(T), range 7000 yards. Examined trawler from range of 1600 yards. Sails did not appear to be in use and about every 5 minutes, trawler would emit large puff of smoke. It appeared to be in a dilapidated condition and no

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14 May 1944 (Cont.)

- 0745 insignia could be observed. Tracked on course 140 (T), speed 7 knots (132 rpm). Estimated trawler to be possible decoy moving in advance of traffic, and decided not to reveal own position by gun attack. Maintained submerged patrol across trawler's track until 1115 when surfaced and searched vicinity. Trawler mounted two machine guns (one forward and one atop bridge). A small deck-house aft may have concealed a larger gun. Sides were high and a cargo loading door was observed on the starboard bow. Picture taken at 2000 yards.
- 1500 Continued surface patrol across traffic lanes in vicinity Scarborough Shoal.

15 May 1944

Surface patrol across traffic lanes between Scarborough Shoal and Macclesfield Bank.

16 May 1944

Surface patrol vicinity enemy traffic focal point Lat. 14-00 N.; Long. 117-00 E. Started south to exploit possible enemy activity vicinity Dangerous Grounds. At 1916 transmitted Cod three dispatch informing CTF 71 of action and requesting 3 day extension.

17 May 1944

Surface patrol vicinity possible enemy activity north of Dangerous Grounds.

- 0846 Latitude 12-16 N.; Longitude 116-18 E. Sighted smoke bearing 221 (T), distant about 30 miles. Tracked on surface. Distinguished masts and smoke from 4 or more ships and 4 or 6 escorts, on course 070 (T), speed 9-10 knots.
- 0900 Submerged ahead of convoy.
- 0952 Sighted type "Mavis" plane over convoy (A/C Contact #13).
- 1130 With convoy on easterly course, an opportunity to attain attack position seemed remote, so planned to observe target's formation then make end around for night surface attack. Because of glassy sea surface and air escort ran at 100 feet between observations. About
- 1210 Convoy changed course to northeast and 2 escorts of Chidori type which were patrolling about 4000-5000 yards on flank and bow of formation headed towards our position.
- 1216 At range of about 2000 yards one escort apparently made sound contact, shifted to short scale and speeded up. Went deep while rigging for

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17 May 1944 (Cont.)

- 1216 depth charge. No depth charges but escort milled around until about 1330, during which time it was necessary to run silent while evading.
- 1340 While coming to periscope depth, sound reported fast screws bearing 020 (T). Periscope observation showed a Chidori, angle on bow 120 starboard, range about 3000 to 4000 yards, making about 20 knots on an easterly course. Masts of convoy visible to northeastward. Followed convoy submerged.
- 1440 Sighted same Mavis plane bearing 070 (T). Remained in sight until 1640.
- 1715 Smoke of convoy disappeared on bearing 055 (T).
- 1817 Surfaced and commenced chase of convoy at 17 knots.
- 1838 Sighted submarine bearing 035 (T), range about 14,000 yards. Submarine appeared to have either just surfaced or just come into our visible range (Contact #16). Identified submarine as friendly, thought to be the Robalo. Unsuccessfully attempted to communicate via MN. Tried to close, but submarine speeded up and passed out of visible range on an easterly course, at 1900. Experienced interference on SJ while submarine was in sight.
- 2100 Lat. 12-41.8 N.; Long. 116-50.6 E., made radar contact bearing 087 (T), range 18,000 yards. Commenced tracking and developing contact, which was apparently convoy for which we were searching.
- 2210 Convoy consists of 9 ships (possibly more) of which 4 appear to be large ships and 5 escorts, on courses 070-110 (T) at speed 8-9 knots. Escorts appear to be well out on flanks.
- 2227 About 8000 yards on port quarter of selected target, a large (MFM) AK, gaining position ahead. Experienced radar interference similar that caused by SJ.
- 2228 Made radar contact dead ahead 067 (T), range 4500 yards and simultaneously sighted what appeared to be either a submarine or an escort bows on. Increased speed to full and put contact astern, closest range 3500. Decided contact was friendly submarine so commenced getting into attack position on starboard side of convoy.

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18 May 1944

- 0010 Lat. 12-31.3 N.; Long. 117-19.2 E., on starboard flank of convoy range 10,000 yards.
- 0020 With target bearing 017 (T), on course 110 (T), speed 8 knots, commenced closing for attack.
- 0025 Experienced radar interference similar to that caused by another SJ.
- 0031 Made radar contact on small pip, bearing 139 (T), range 6200 yards and closing rapidly. Put contact astern and increased speed. Contact not sighted.
- 0043 Lost contact at 8000 yards. Decreased speed and lowered sound heads. Heard nothing. Decided that either we are interfering with the friendly submarine as much as he is with us, or that this convoy has small escorts equipped with radar. The ARC, operated during this second approach, indicated the presence of a radar on a frequency of 270 Mcs and a pulse rate of 400 per second which is listed as being employed by Japanese escort ships.
- 0055 Decided to try again to get into attack position on the port flank of convoy and if unsuccessful, to make end around for dawn submerged attack, since the efficiency of our radar has decreased appreciably. Ships comparable in size to escorts sighted with this convoy and friendly submarines had been detected previously at 12,000 - 16,000 yards.
- 0119 Contacted convoy at 17,000 yards bearing 064(T) and started working around flank escorts to get in position ahead.
- 0144 Lat. 12-34 N.; Long. 117-38 E. With target bearing 110 (T), range 9,000 yards, heard 3 heavy explosions in direction of target and about 2 minutes later 4 more explosions in rapid succession. Noticed increased stack smoke from target which appeared to change course to southeast. Reversed course and opened range on closing escort. Explosions were very heavy and sounded more like torpedo explosions than depth charges, except that they occurred in rapid succession.
- 0218 Lost escort astern and commenced end around for dawn attack position.
- 0436 Sighted what appeared to be smoke bearing 273 (T).
- 0503 In estimated dawn position of convoy submerged for trim, checked torpedoes and since smoke contact did not develop, at

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18 May 1944 (Cont.)

- 0900 Surfaced and commenced search.
0957 Sighted smoke of convoy bearing 102 (T),
distant about 15 miles. (Latitude 12-58
N.; Long. 117-53 E.) Started end around.
1045 Submerged for type "Betty" plane sighted at
8-10 miles bearing 093 (T) on closing course.
(A/C Contact #14) Plane in sight until 1300.
1642 Lost sight of smoke bearing 050 (T), and
surfaced to chase at 17 knots.
1736 Smoke in sight bearing 037 (T). (Latitude
12-10.5 N.; Long. 118-21 E.).
1859 Latitude 13-28 N.; Longitude 113-35 E.
Thirty minutes after sunset sighted small ship
resembling submarine bearing 015 (T), range
12,000. No radar contact but interference
experienced as from another SJ. Ship popped
into view suddenly and had all appearances
of a submarine having just surfaced. Closed
range to establish communication.
1909 Identified ship as Chidori type torpedo boat,
range about 10,000 yards on course 130 (T)
at about 10 knots speed. Believed to be
convoy escort either making a sweep or taking
station astern convoy. At range of about
9,000 yards escort changed to easterly
course.
1915 Increased speed to 16 knots ran around escort
and searched for convoy in easterly direction
since it was believed that convoy would
use passage between Cape Calavite and Golo
Island to reach Manila.
2330 Reached desired position ahead of convoy and
commenced search to northward.

19 May 1944

- 0220 About 30 miles northwest of Cabra Island
made radar contact bearing 010 (T), range
20,000 yards. Hazy but good visibility with
much lightning. Closed bearing and commenced
tracking. In lightning flashes sighted 3 or
4 large ships with 4 or 5 smaller ships,
probably escorts, on the near flank. The
large AK or AP (MFM) which had been selected
as target during previous attempts on this
convoy was still in formation.
0243 Paralled target on course 110 (T) at about
10,000 yards and increased speed to 17 knots
to get ahead.
0250 Convoy zigged to course 080 (T).

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19 May 1944 (Cont.)

- 0258 Undetected escort on our port quarter started flashing a light at us. Put light astern and opened range.
- 0312 Sighted what appeared to be small craft on our port bow. No radar contact. Changed course to the south to put contacts astern.
- 0322 Lost radar contact on target group bearing 040 (T). Observed searchlight sweeping horizon on a bearing 050 (T). With escorts aware of submarine's presence and morning twilight due in an hour, further attempts to reach an attack position appeared futile. The consistently unsuccessful attempts to get in an attack on this particular convoy were discouraging. Decided to patrol southwest of Cabra Island light, get some sleep and be in position for possible enemy activity vicinity Mindoro Strait this evening.
- 0500 Submerged for patrol. Checked radar.
- 1858 Surfaced and patrolled across the southwestern approaches to Manila area.

20 May 1944

- 0132 Lat. 13-01 N.; Long. 119-34 E., heard 2 explosions either depth charges or torpedoes. Lay to and manned sound gear.
- 0137 Heard 4 distant explosions and echo-ranging.
- 0141 Radar contact bearing 219 (T) range 12,000 yards. Pip seemed comparable to PC or Chidori type torpedo boat. Echo-ranging. Went ahead at 12 knots changing course to put pinger astern while tracking. Tracked on course 355 (T), speed 7 knots. (Contact #18).
- 0153 Heard 2 explosions, direction undetermined. Increased speed to 15 knots when pinger increased speed to 17 knots and headed for us. Gradually altered course to east and southeast to lose pinger who went out of range on a northerly course.
- 0240 Worked back to enemy's estimated track.
- 0350 In Latitude 13-12 N.; Longitude 119-42 E. made radar contact bearing 183 (T), range 4000 yards. Sighted nothing altho visibility was good.
- 0400 Sighted green flare of rocket on Very's pistol type bearing 260 (T), estimated distance about 2 miles. Changed course to put flare astern.
- 0405 Radar contact bearing 291 (T), range 3000 yards, which abruptly disappeared. Sighted nothing in good visibility. Decoded Hoe dispatch relative attack on convoy apparently in our vicinity. Flare and close radar contacts could

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20 May 1944 (Cont.)

- have been the Hoe, since green was correct emergency identification signal until 0200, however, since no radar interference was experienced, it seemed more likely that the flare was from a sailboat spotter. In any event we appeared to be on the daylight track of convoy. Searched area until dawn.
- 0425 Submerged for patrol across expected track of convoy.
- 0621 Sighted float plane type "Pete" (A/C Contact #15) distant 5 miles on various southerly courses, apparently searching area. Plane disappeared on bearing 180 (T) at 0650.
- 1113 Sighted same or similar type plane bearing 180 (T), distant 8-10 miles which disappeared to northward. (A/C Contact 16).
- 1150 Sighted sailboat bearing 057 (T), range 7-8 miles on northerly course (Lat. 13-12 N.; Long. 120-12 E.).
- 1908 Surfaced and stood to the southward, preparatory to leaving area.
- 1910 Made radar contact bearing 003 (T), range 8200 yards and experienced radar interference. Identified contact as submarine probably Hoe, which appeared to be on a course for Apo East Pass, (Lat. 12-56 N.; Long. 120-15 E.) so headed for Apo West Pass.

21 May 1944

- Surface patrol transiting Apo West and Cuyo East Passes.
- 0500 Submerged in Cuyo East Pass.
- 1800 Surfaced and stood south along enemy traffic lanes passing to westward of Calusa Island, and then on southwesterly course to Pearl Bank.

22 May 1944

- 0534 Sighted unidentified object bearing 300 (T), unknown range (Lat. 08-23 N.; Long. 120-57.1 E.).
- 0543 Object appeared to be submarine. Submerged.
- 0615 Identified U. S. Submarine, probably Hoe, bearing 305 (T), range 20,000 yards on course 210 (T), at speed 14 knots.
- 0652 Surfaced and attempted overhaul and communicate with U. S. Submarine.
- 0700 Sighted submarine bearing 270 (T), range 20,000 yards. Attempted overhaul but submarine apparently sighted us, increased speed and was lost to sight on a southwesterly course. Definitely identified as friendly.

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22 May 1944 (Cont.)

- 1448 Submerged when SD radar contact closed from 10 to 7 miles (A/C Contact #17). Maintained periscope watch but neither aircraft nor traffic sighted.
1800 Surfaced and stood toward passage west of Pearl Bank.

23 May 1944

- 0100 While transiting Sibutu Passage in vicinity to Lat. 05-08 N.; Long. 119-30 E., made numerous radar contacts at ranges 2000 to 800 yards on small objects, none of which could be sighted. Radar pips were similar to those obtained on oil drums or fishstakes. Due to reports of Sibutu Passage being heavily patrolled, passage was made on southerly courses at distances 3-4 miles off the east coast of Sibutu Island. During transit approximately 30 of these radar contacts were made, the southernmost being about 6 miles east of Saluag Island light. One or two were passed at ranges 400-500 yards but in spite of fair visibility, were not sighted.
0500 Submerged about 20 miles south of Sibutu Passage.
1101 Sighted type "Jake" float plane bearing 182 (T), distant 3-4 miles on northerly course, apparently gliding toward periscope. Sky overcast and plane not sighted until at close range. Apparently searching area. (A/C Contact 18).
1128 Heard distant explosions apparently depth charges which lasted intermittently until 1700.
1838 Surfaced and proceeded along traffic lanes enroute Makassar Strait.

24 May 1944

- 0352 In position about 20 miles north of North Watcher Island experienced radar interference. (similar to that of another SJ) bearing 265 (T), unknown range. Interference disappeared on bearing 215 (T), at 0435. Assumed to be Bluefish thru whose area we are passing.
0505 Made radar contact on North Watcher Island bearing 144 (T), distant 12 miles.
0515 Sighted small craft bearing 160 (T), range about 6000 yards.
0525 Identified craft as sailboat.
0530 Submerged. Sighted 3 sailboats during day, apparently native craft.
1650 Surfaced, and patrolled along traffic lanes enroute Cape William.

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25 May 1944

0530 Submerged off Cape William. Numerous sailboats and wreckage in sight during day.

1830 Surfaced and proceeded Lombok Strait via passage east of Lima Islands.

26 May 1944

0725 Submerged for aircraft radar contact distant 10 miles closing. (A/C Contact #19).

1820 Surfaced, made landfall on Sekala Island and proceeded Lombok Strait.

2245 Radar contact bearing 234 (T), range 6500 yards, either sailboat or patrol. Tracked on course 120 (T), speed 6 knots. Avoided. (Lat. 07-42.3 S.; Long. 116-08.5 E.) (Contact #19).

2327 Radar contact bearing 164 (T), range 8000 yards, appeared to be lying to. Not sighted. (Lat. 07-52 S.; Long. 116-14.4 E.) (Contact #20).

2336 Radar contact bearing 281 (T), range 8700 yards. (Lat. 07-46.1 S.; Long. 116-05.8 E.) (Contact #21) Tracked on course 040 (T), speed 6 knots. These radar pips were comparable to those obtained on small subchasers and fair-sized sailboats.

27 May 1944

0103 Radar contact bearing 303 (T), range 9100 yards (Lat. 08-09.5 S.; Long. 115-54.5 E.) (Contact #22) Tracked on course 160 (T), speed 4 knots. Increased speed to 17 knots and avoided.

0124 Sighted flashing light from small craft off Trewangan Island.

0130 Entered Lombok Strait.

0138 Radar contact bearing 120 (T), range 6000 yards in position 1 mile west of Trewangan Island. (Contact #23).

0228 Radar contact bearing 226 (T), range 9000 yards. (Lat. 08-34.5 S.; Long. 115-46.7 E.) (Contact #24). Tracked on course 080 (T), speed 4-8 knots. Avoided.

0415 Completed transit, remaining close to west coast Lombok Island, with no further contacts.

0530 Submerged about 15 miles south of Lombok Strait.

1745 Surfaced and proceeded Fremantle.

28 May - 31 May 1944

Enroute Lombok Strait to Fremantle.

1 June 1944

0700 Contacted escort, proceeded harbor, and completed patrol.

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(C) WEATHER

Excellent thruout patrol. Smooth, glassy seas prevailed along Zamboango Peninsula, the Sulu Sea and along the coast of Luzon with little or no wind.

(D) TIDAL INFORMATION

During passage from Sibutu Passage thru Lombok Strait via Makassar Strait, 22 May to 27 May, experienced average southerly set of 1.2 knots.

94E) NAVIGATIONAL AIDS

No lighted navigational aids sighted. All lighthouses in areas patrolled appear intact and in proper position.

Navigational plotting in the South China Sea areas would be simplified if combinations of the following H.O. charts, reduced to one-half their present scale, were available:

- (1) H.O. Chart No. 0796 combined with H.O. Chart No. 0798.
- (2) H.O. Chart No. 0797 combined with H.O. Chart No. 0799.

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(F) SHIP CONTACTS

R - SJ Radar
SD - Surface Day
SN - Surface Night
P - Periscope Submerged

No:	Time	Ship's Date	Latitude	Type	Initial	How	Remarks
1	:0114	:05-26 S. :19 Apr.	:118-39 E.	: SC	:9000	:100(T)	:R-SN :Patrolling :approaches :Makassar :City. :Avoided.
2	: 1219	:05-15 S. :19 Apr	:118-20 E.	:Smoke	:40, :000	:270(T) : 8	: P :Lost :Contact
3	: 0311	: 07-10 N. :25 Apr.	:121-34 E.	:Smoke	:18, :000	:160- :210 (T) :15-16	:R-SN :Chased, :Source :not :sighted.
4	: 1224	: 07-58 N. :28 Apr.	:122-12.7 E.	:AM	: 16, :000	:215(T) : 6-7	:Probably :Minesweep- :ing.
5	: 1248	: 07-58 N. :28 Apr	:122-13.2 E.	:PC	:14, :000	:210(T) : 6-7	:Probably :Minesweep- :ing.
6	: 1333	: 07-52.8 N. :29 Apr	:122-07.6 E.	:Traw- :ler	:12, :000	:South- :erly :Sea- : 8 :truck	: P :Not suit- :able tar- :get in vie :own posit :and expect :ed enemy activity this area.
7	: 1332	: 08-57 N. : 1 May	:123-10 E.	:Un- :ident.	: 25, :000	:020(T) : 000	: P :Sighted :masts only. :Passed out :of range.
8	: 0550	: 16-09 N. : 7 May	:119-44 E.	:2- :trawlers	:8000	:South- :erly :1 PC: : 7	: P :Either :patrolling :or sweepin
9	: 0513	: 14-5812 N. : 9 May	:119-46 E.	:CM :Okino	: 6000	:300(T) : 20	: P :No suit- :able op- :portunity :for attack

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(F) SHIP CONTACTS (Cont.)

No.:	Time	Latitude	Ini	Type	tial	Course	cont-	How	
			:	Date	:Longitude	E	:Range	:Speed	:acted:Remarks
10	: 0918	: 15-05 N.	:	Escort	18,	:210-	:	P	: *
	: 9 May	: 119-34 E.	:	Ships	000	:170(T):	:		
	:	:	:	Masts-	30;	12 :	:		
	:	:	:	Smoke	000	:	:		
	*Convoy of unidentified composition consisting of 6 or more ships as evidenced by smoke and masts. Out of range.								
11	: 0159	: 16-16 N.	:	Large	32,	:180(T):	SN	:	Attacked.
	: 10 May	: 119-28 E.	:	Convoy	000	: 10	:		
12	: 1852	: 15-58 N.	:	Chi-	2000	: Easter-	P	:	Searching
	: 10 May	: 119-23 E.	:	dori:		: ly			
	:	:	:	orPC:		: 6-10	:		
13	: 2343	: 16-34 N.	:	PC	8000	: 200(T):R-SN	:	Searching	
	: 10 May	: 118-20 E.	:	or AM		: 12	:		
14	: 0745	: 16-28 N.	:	Traw-	7000	:140(T):	P	:	Considered
	: 14 May	: 118-17 E.	:	ler	:	: 7	:		decoy in ad-
	:	:	:	:	:	:	:		vance of
	:	:	:	:	:	:	:		traffic.
15	: 0846	: 12-01 N.	:	Con-	50,	:070(T):	SD	: *	
	: 17 May	: 116-03 E.	:	voy	:000	: 10	:		
	*Convoy of 5 or more ships with 5-6 escorts. Unsuccessful in attempts to gain attack position.								
16	: 1838	: 12-29 N.	:	U.S.:14,	:14,	:090(T):	SD	:	Either Hoe
	: 17 May	: 116-39 E.	:	Sub	: 000	: 15	:		or Robalo
17	: 1859	: 13-35 N.	:	Chi-	12,	:130(T):	SD	: *	
	: 18 May	: 118-35 E.	:	dori:	000	: 12	:		
	*Probably escort making sunset sweep astern of convoy, (Contact #15).								
18	: 0141	: 12-56 N.	:	Chi-	12000	:355-	R	:	Probably
	: 20 May	: 115-32 E.	:	dori:		:040(T):			chasing friendly
	:	:	:	:	:	:7-17	:		S/M after attack
19	: 2245	: 07-42.3 S.	:	Pat-	6500	:120(T):	R	:	Patrolling
	: 26 May	: 116-08.5E.	:	rol	:	: 6	:		north of
	:	:	:	Boat:	:	:	:		Lombok St.

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(F) SHIP CONTACTS (Cont.)

No:	Time	Latitude	Type	Initial	Course	cont-	How
		Date	Longitude		:Range	:Speed	:acted:Remarks
20:	2327	07-52 S.	Sail	8000	0	:	R :Possible
	:26 May	116-14.4 E.	:or	:	:	:	:patrol
	:	:	:Patrol	:	:	:	:north
	:	:	:Boat	:	:	:	:of Lombok
	:	:	:	:	:	:	:Strait.
21:	2336	07-46.1 S.	Pat-	8700	040(T)	:	R :Patrolling
	:26 May	116-05.8 E.	:rol	:	6	:	:north of
	:	:	:	:	:	:	:Lombok St.
22:	0103	08-09.5 S.	Pat-	9100	160(T)	:	R :Patrolling
	:27 May	115-54.5 E.	:rol	:	:	:	:north
	:	:	:	:	:	:	:entrance
	:	:	:	:	:	:	:Lombok St.
23:	0138	08-19.5 S.	Sail	6000	0	:	R :Flashed
	:27 May	115-58 E.	:boat	:	:	:	:light from
	:	:	: or	:	:	:	:position
	:	:	:Patrol	:	:	:	:1 mile
	:	:	:	:	:	:	:west
	:	:	:	:	:	:	:Trewangan
	:	:	:	:	:	:	:Island
24:	0228	08-34.5 S.	Pat-	9000	080(T)	:	R :Patrolling
	:27 May	115-46.7 E.	:rol	:	4-8	:	:inside
	:	:	:	:	:	:	:Lombok St.
	:	:	:	:	:	:	:

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(G) AIRCRAFT CONTACTS

P-Periscope Sighting

R-SD Radar

S-Surface Sighting

Plane's NS-Not Sighted

No: Time :Latitude :Type:Ini- :Cou- :con-:
: Date :Longitude : :tial :rse :tact:Remarks
: : : :Range: : ed:

1 : 1329 : 5-06.5 S. :Float 10 :Various P :Either
:19 Apr:118-18 E. : :miles: : :patrolling
: : : : : :over or
: : : : : :escorting

2 : 0826 : 02-48 S. :Float 10 : SW : P :Patrolling
:20 Apr:118-37.5 E.: :miles: : :

3 : 0947 : 00-04 S. :Float 8 : SE : P :Patrolling
:21 Apr:118-33.6 E.: :miles: : :

4 : 1000 : 07-56.7 N.:Oscar 1 :225 : ? : *
:28 Apr:122-08.5 E.: :mile :(T) : :
*Low altitude - high speed, flying along coast.

5 : 1414 : 08-52 N. : NS : 12 : NS : R :
:3 May :119-32 E : :miles: : :

6 : 0630 : 13-20 N. : NS : 11 : NS : R :
: 8 May :119-26 N. : :miles: : :

7 : 0700 : 13-20 N. :Un- : 12 :South- P :
:8 May :119-26.5 E.:ident miles--erly: :

8 : 1150 : 13-14 N. :Betty 5 : SW : P :
:8 May :119-33 E. : :miles: : :

9 : 0650 : 15-06.5 N.:Rufe: 4 :Var- : P :Patrolling
:9 May :119-43 E. : :miles:ious : :

10: 0825 : 15-15 N. :Float 10 :150(T) P :Patrolling
:9 May :119-35 E. : :miles: : :

11: 0841 : 15-09 N. :4- : 12 :var- : P :Escorting
: 9 May:119-32 E. :Rufes:mi. :ious : :ship contact
: : :1- : : : : #:10
: : :Sally : : :

12: 0517 : 15-46 N. :Mavis 6 :Var- : P :Escorting
:10 May:119-25 E. : :miles:ious : :Ship Contact
: : : : : #:11.

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(G) AIRCRAFT CONTACTS(Cont.)

No:	Time	Latitude	Type	Ini-	Con-	:con-:
		Date	Longitude	tial	rse	tact:Remarks
					Range:	ed :
13:	0952	12-05 N.	Mavis	10	Var-	P : Escorting
	:	17 May	116-12 E.	:	miles:ious	:ship contact
				:	:	#15.
14:	1045	12-57 N.	Betty	8	220(T) S	:Escorting
	:	19 May	118-08 E.	:	miles:	:ship cont-
				:	:	act #15.
15:	0621	13-07 N.	Pete	5	180(T) P	:Searching
	:	20 May	119-56 E.	:	miles:	:Area.
16:	1113	13-07 N.	Pete	8	220(T)	P :Probably
	:	20 May	120-04 E.	:	miles:	:same as
	:			:	:	:A/C Con-
	:			:	:	tact 15.
17:	1448	06-50.2 N.	NS	10	NS	R :Closed to
	:	22 May	119-54.3 E.	:	miles:	:7 miles.
	:			:	:	:Submerged
	:			:	:	:not sighted.
18:	1101	03-55 N.	Jake	3	350(T) P	:Patrolling
	:	23 May	119-39 E.	:	miles:	:south of
	:			:	:	:Sibutu.
19:	0725	06-11.4 S.	NS	10	NS	NS :Not
	:	26 May	116-40.7 E.	:	miles:	:sighted.

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(H) ATTACK DATA

U.S.S. COD (SS224) Torpedo Attack No. 1 Patrol No. 3
Time 0556 Date 10 May 1944 Lat. 15-38 N.
Long. 119-25 E.

Target Data - Damage Inflicted

DESCRIPTION

Ships attacked formed parts of a 20 ship well escorted convoy. Attained firing position between a flank escort destroyer of Kamikaze class and two columns of AK-AP type ships. The near column of 3 ships was separated from far column of 2 ships by an interval of approximately 1400 yards. Ships were in a line of bearing 135 (T) on course 180 (T). Distance between ships 400-500 yards. Attacked Kamikaze type destroyer with 3 torpedoes from stern tubes, then fired 2 torpedoes from bow tubes at rear ship of near column (AP similar Kasado Maru p.33, ONI 208-J). Shifted set-up to second ship of near column (AK-AP similar Asosan Maru p.84 ONI 208-J) and fired 4 torpedoes at an overlapping target presented by this ship and the two ships of the far column (AK-AP similar Brisbane Maru p.91, ONI 208-J the leading ship, and an AK-AP similar Sanko Maru p. 101, ONI 208-J). Convoy, sighted at range of 15 miles in bright moonlight, latitude 16-16 N.; longitude 119-28 E., zigged between courses 140 and 160 (T) at speed 10-11 knots. Tracked on surface by sight and radar until 0438 when submerged for dawn attack. In addition to surface escorts, 1 or 2 type "Mavis" flying boats acted as an air screen.

Ships Sunk:

- (1) Number: One
- (2) Type: Destroyer (Kamikaze Class)
1315 tons.

Damage Determined by:

Observed two torpedoes hit. First hit amidship and appeared to break ship's back causing it to sag in the middle. Second torpedo hit just abaft mainmast and disintegrated the after portion of the ship. Explosions, crackling and breaking-up noises heard for ten minutes after hits.

Target Draft 9, Course 170 (T), Speed 10, Range 625.

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(H) ATTACK DATA (Cont.)

Ships Damaged or Probably Sunk:

- (1) Number: Three
- (2) Type:
 - (a) AP, similar Kasado Maru (p.33 ONI 208-J)
6003 tons.
 - (b) AP-AK, similar Asosan Maru (p. 84, ONI 208-J)
8812 tons.
 - (c) AP-AK, similar Brisbane Maru (p.91, ONI 208-J)
5423 tons.

Damage Determined by:

(a) Fired 2 torpedoes at this target.
Sound tracked torpedoes to target; heard one hit
thru hull and sound gear 56 seconds after firing.
Usual cracking and breaking up noises heard.

(b) Fired four torpedoes at this target.
Heard 3 torpedoes hit after correct interval,
followed by explosions and breaking-up noises.
Believe this ship sank.

(c) Heard one torpedo hit about 2
minutes 15 seconds after firing last torpedo.
Sound tracked this torpedo until it hit. Heard
ripping and tearing noises immediately after hit.
The time of explosion checks with the torpedo
run for a hit on the leading ship of the far column.

(a-b-c) During evasive tactics continued
to hear breaking up noises, explosions and rumblings
on bearings of these ships, over a period of 30-45
minutes. For two hours after firing heard at
intervals characteristic firecracker explosions of
an ammunition cargo.

Target: (a) Draft 15 Course 180 (T) Speed 10 Range 1400
(b) Draft 15 Course 180 (T) Speed 10 Range 1800
(c) Draft 20 Course 180 (T) Speed 10 Range 3500

Own Ship Data

Speed 2.4 knots Course 096-093 (T) Depth 64' Angle 0

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(H) ATTACK DATA (Cont.)

Fire Control and Torpedo Data

Type Attack

Periscope attack submerged about 20 minutes after sunrise. Targets' speed and zig plan determined accurately during 3½ hour surface chase. Except for last two torpedoes, periscope bearings were set into TDC prior firings. Three torpedoes were fired from stern tubes at the destroyer with large gyro angles (40-50 degrees) and a short torpedo run. It was particularly gratifying to watch them hook round and smack the target. Shifted set-up for the bow tubes and fired two at the nearest ship with a torpedo run of 1400 yards, a good track angle and small gyros. Shifted bearing to the largest ship in the formation and fired 4 torpedoes with a torpedo run of 1850 yards, 20 degree gyro angles and a 112 degree track angle. Three torpedoes were heard to hit. The first torpedo fired of these four passed ahead and hit the leading ship of the far column after a run of about 3800 yards, which along with the rear ship of the far column overlapped the near target. Depths were set alternately at 6 and 8 feet, so that if the torpedoes ran far enough they would be bound to hit something, since there were so many ships in the way. The picture at the time of firing and the tracks of the torpedoes is included. From best available data the following information on firing times and torpedo hits is submitted:

<u>Shot</u>	<u>Tube</u>	<u>Aimed</u>	<u>Hit</u>	<u>Time Fired</u>	<u>Time Explosion</u>	<u>Torpedo Run</u>
1	7	DD	DD	05-55-51	05-56-17	650
2	8	DD	DD	05-55-59	05-56-26	675
3	9	DD	Miss	05-56-08	--	
4	3	Kasado	Kasado	05-56-39	05-57-35	1400
5	4	Kasado	Miss	05-56-46	--	
6	5	Ososan	Brisbane	05-56-54	05-59-30	3800
7	6	Ososan	Ososan	05-57-01	05-58-12	1875
8	1	Ososan	Ososan	05-57-08	05-58-19	1875
9	2	Ososan	Ososan	05-57-15	05-58-27	1875

CHIDORI

SECOND SECTION OF
CONVOY ABOUT 2000 KMS.
FROM HERE.

N

CANDARI

SENKO MARU

SCALE 1" = 600 YDS.

60

Attack No. 1 May 10, 1944

POSITION OF TARGETS AT FIRING,
AND TRACKS OF TORPEDOES.

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(H) ATTACK DATA (Cont.)

Tubes Fired	No. 7	No. 8	No. 9
Track Angle	114 P	121 P	121 P
Gyro Angle	140	132 $\frac{1}{2}$	134
Depth Set	6	8	6
Power	High	High	High
Hit or Miss	Hit	Hit	Miss
Erractic	No	No	No
Mk. Torpedo	14-3A	14-3A	14-3A
Serial No.	26679	40031	40099
Mk. Exploder	6-5	6-5	6-5
Serial No.	989	994	7574
Actuation Set	Contact	Contact	Contact
Mk. Warhead	16-1	16-1	16-1
Serial No.	2763	11023	5861
Explosive	TPX	TPX	TPX
Firing Interval	0	9	8
Type Spread	0	3 L	3 R
Sea Conditions	Calm		
Overhaul Activity	S.R.U. (Navy #137)		

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(H) ATTACK DATA (Cont.)

No. 3	No. 4	*No. 5	No. 6	No. 1	No. 2
103½ S.	106½ S.	112½ S.	113 S.	113 S.	115 S.
010½	013½	019½	018	018	020
6	8	6	8	6	8
High	High	High	High	High	High
Hit	Miss	*Hit	Hit	Hit	Hit
No	No	No	No	No	No
14-3A	14-3A	14-3A	14-3A	14-3A	14-3A
40186	39547	40188	39989	39738	40344
6-5	6-4	6-5	6-5	6-4	6-4
671	18041	130	33	12196	40
Contact	Contact	Contact	Contact	Contact	Contact
16-1	16-1	16-1	16-1	16-1	16-1
9584	2037	3064	11156	12037	9296
TPX	TPX	TPX	TPX	TPX	TPX
31	7	8	7	7	7
0	1 R	1 L	1 R	0	0

Remarks: *Torpedo fired from No. 5 tube aimed at second ship of near column hit leading ship of far column.

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(I) MINES

No Comments.

(J) ANTI-SUBMARINE MEASURES AND EVASIVE TACTICS.

1. "Mavis" type flying boats furnished air coverage over two of the three convoys sighted. In one case these planes were noted over a convoy at least 30 minutes before sunrise. A convoy encountered 400 miles from nearest known air base, 3 hours after sunrise, had "Mavis" plane escort which stayed with convoy all day.
2. "Saturation" depth charging. After a submerged attack on a large convoy, 4 to 6 escorts dropped about 70 depth charges in 15 minutes. Charges in barrages of 3 to 8 were concentrated in the vicinity of the firing point which had been marked by aircraft bombs less than a minute after firing. Ran deep at maximum submerged speed to get clear of firing point, and suffered no damage, probably because of shallow depth charge settings. Escorts apparently formed a line and ran back and forth across the firing point dropping charges as rapidly as possible. Depth charging then ceased for 5-6 minutes. Three escorts after a short period of intermittent echo-ranging, started criss-cross runs, all three escorts apparently starting from the same direction and criss-crossing over our estimated position. Charges were dropped in batches of 2-3 at intervals of 4-8 minutes, and were set deep. At intervals, depth charging would cease for 5-10 minutes while escorts echo-ranged. They continued this procedure for about an hour dropping a total of 40 charges. Depth charging then ceased for 2½ hours while escorts echo-ranged on long scale, and aircraft apparently searched the depth-charged area, for about this time heard and felt 3 close and heavy charges. Escorts rapidly closed our position and repeated procedure described above, only difference noted was batches of 1 or 4 instead of 2 and 3. This continued for another 45 minutes during which time about 30 charges were counted, the first batches close but gradually opening as we maneuvered to put escorts astern. Closed all main vents after A/C depth charges exploded and was not again detected. Shortly after sunset while preparing to surface 12 hours after firing and 20 miles from attack position encountered a Chidori T.B. apparently searching the area.

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(J) ANTI-SUBMARINE MEASURES AND EVASIVE TACTICS. (Cont.)

3. Trailing escorts. On one occasion during daylight observed Chidori escort trailing convoy by 10 miles and on another occasion encountered a Chidori escort shortly after sunset, either conducting a sweep or taking position at least 15 miles astern convoy.
4. Met with nothing but failure in attempts to gain suitable surface attack position on well-escorted convoys covered by escorts patrolling 2000-4000 yards on flanks and quarters of formation. From experience gained this patrol, believe more success could have been achieved by tracking convoy and developing its composition from a position well out on flank, then making end-around to approach attack position from ahead or sharp on the bows of the convoy. Radar equipment operating at peak efficiency is essential.

(K) MAJOR DEFECTS AND DAMAGE.

Engineering

1. Main engine: One out of commission for 24 hours while renewing circulating salt water pump. Pump damaged beyond repair due to ball bearing failure.
2. Gyro Compass: Replaced north rotor bearings, Both rotor bearing ball races scored, due faulty material.
3. Pitometer Log: Collision with submerged object bent or broke swordarm. Renewed with spare which was found to be a reworked swordarm full of curves and bends. Impossible to raise swordarm without danger of breaking chain hoist. The continued unreliable operation of this equipment and the excessive care required for upkeep and repair entitles it to the criticism implied by the electrician's mate's desire "when the war is over, I want to set this pitlog on my front lawn and watch the dogs play on it".
4. Stern tubes: Excessive leakage due overheated or worn out packing.

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(K) MAJOR DEFECTS AND DAMAGE (Cont.)

Ordnance

1. Deck gun: Training mechanism unreliable. Altho greased and routined daily, after all day dives and deep submergence, it is usually impossible to train gun without excessive difficulty until it is again routined and greased. Apparently the grease is washed or forced out from the roller path and training mechanism by water pressure.

Trim Pump - Unreliable and noisy.

(L) RADIO

Radio reception satisfactory and all serials received. Transmitted five dispatches, 2 from Manila area, and 3 from positions south of Barrier. All were receipted for by VIX⁰ after an average transmission time of 10 minutes. In Manila area, heavy modulated and unmodulated CW jamming was practically continuous on all Baker frequencies. In general, VIX⁰ heard best thru jamming on 9270 kcs., but static noises on this frequency found to be exceptionally high.

(M) RADAR

SD Radar: In general, functioned satisfactorily with reliable plane contacts at 8-10 miles. Slightly reduced filament voltage (from 15 to 14.3 volts) appreciably decreased the failures of 8014A tubes. Washing the antenna with soap and fresh water increased the antenna insulation resistance from 20,000 ohms to 30 megohms. This procedure found to be necessary every third or fourth day. Glyptol applied to antenna insulator helps maintain higher insulation resistance.

SJ Radar: Performed exceptionally well until depth charged; after which range and performance decreased appreciably, as evidenced by poor ranges when in contact with a convoy. Between time of depth charging and contact with convoy, no contacts were made and opportunity to check tuning and performance not available. Upon retuning and renewal of crystal detector performance again became exceptional. Learned that it is sound routine to check and retune radar soon as possible after depth charging. Require

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(M) RADAR (Cont.)

increased output voltage rectifier to improve the performance of this installation. During patrol renewed the following parts:

- 1 - Modulator network.
- 3 - Crystal detectors.
- 1 - 706-AY magnetron
- 1 - Resistor (R-39)
- 9 - 6AC-7 tubes.
- 2 - 6SN7 tubes.

ARC: Intermittent indications of enemy radar operated on 275 mcs - 400 pls were observed in following localities:

April 26 - Vicinity Basilan Strait.

May 8 -- Vicinity Cape Calavite.

May 17-18- Vicinity enemy convoy.

Indications received by this equipment are not considered reliable, and may in some cases be attributed to own ship interference.

(N) SOUND GEAR AND SOUND CONDITIONS.

Sound gear so far as reception was concerned performed in a highly satisfactory manner. For all areas patrolled, sound conditions were excellent. In the Manila area echo-ranging was detected at a range of 30,000 yards. At present, a major defect exists in the sound gear. At deep submergence (200 or more feet), with an up-angle greater than 2 degrees, rotation of the sound heads causes a deep, loud rumbling which effectively prevents silent running. While under attack and attempting to evade by silent running it was necessary on two occasions to discontinue use of the supersonic sound gear due to the excessive noise caused by rotating the sound heads.

(O) DENSITY LAYERS

Typical density layers in operational area are tabulated below; no marked change was noticeable during any one day:

Date	Location	Latitude	Longitude	Layer Limits	Temp Chg.	Amt. Fld.
4/16	Flores Sea	06-10 S.	122-12 E.	210-300	10	5500
		Off t				
4/18	Saleier Str.	06-46 S.	120-06 E.	210-300	8	4000

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(O) DENSITY LAYERS (Cont.)

Date	Location	Latitude	Longitude	Layer Limits	Tmp. Chg.	Amt. Fld.
	Off					
4/25	Basilan Str.	07-02 N.	121-38 E.	150-300	8	5000
4/24	Dulunguin Point.	07-46 N.	121-55 E.	50-300	8	3500
5/30	Coronado Pt.	08-03 N.	122-03 E.	60-300	8	4000
5/10	Luzon Coast	14-58 N.	119-38 E.	80-300	7	?
5/14	Scarborough	16-41 N.	116-20 E.	80-300	16	10,000

(P) HEALTH, FOOD, AND HABITABILITY

Health thruout patrol was generally excellent due to good food and the efficiency of the air conditioning equipment.

Food was highly satisfactory principally because U. S. instead of Australian beef was available.

Habitability improved during all day dives by use of CO₂ absorbent. Fumigation during current refit is urgently required.

(Q) PERSONNEL

Under battle conditions all officers and men performed their duties in keeping with the highest traditions of the Navy.

Particularly outstanding and worthy of special credit were the performances of duty of the following officers and men:

Lieut. Comdr. H. Pissell, Jr., USNR., who, as executive officer and navigator was instrumental in organizing and training the fire control party, aided in developing the contact and as TDC operator, contributed outstandingly to the success attained on the submerged attack of May 10th, during which nine torpedos were fired in approximately 1½ minutes at three different targets and 7 hits obtained. During three war patrols this officer has performed his duties in such a competent, skillful, and highly successful manner as to bring credit to our naval reserve policy, our Navy and himself. He should be given command of a fleet type submarine at the earliest practicable time.

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(Q) PERSONNEL (Cont.)

Lieut. Comdr. C. V. Gordon, USN. as engineer and diving officer has consistently maintained this ship in perfect diving trim during approaches and while firing torpedoes and during all counter-attacks, particularly the severe attack on May 10th. His competence, skill and calmness assisted materially in successful evasive action.

LUDWIG, John Kimball, CRM(AA), USN. who, in addition to maintaining the radio department in a high state of efficiency, has developed amazing skill as sound operator. During ten war patrols, seven of which have been under my command, he has proven himself a vital factor during all attacks and counter-attacks. Thru skillful operation of the sound gear he has aided the Commanding Officer materially in attaining attack positions. During all counter-attacks thruout these patrols his cognizance of the existing situations and constant supply of accurate information has, more than any other factor, enabled the Commanding Officer, in successful evasion. His alertness and quick action while on listening watch has on three separate occasions been responsible for initiating action which extricated submarines from serious situations and saved them from possible loss.

WALLACE, John (n), RTlc, V-6, USNR. who, as radar operator and technician, has diligently applied himself to maintaining the radar equipment in efficient operation. During three war patrols his rapidly acquired technical skill in diagnosing and repairing casualties and damagements in this equipment and his skill as an radar operator has been responsible to a great degree, for sinking and damaging enemy shipping.

(R) MILES STEAMED - FUEL USED

Fremantle to Barrier (Via Darwin)	2366 Miles	29717 Gals.
North of Barrier	7774 Miles	68140 Gals.
Barrier to Fremantle	1444 Miles	16560 Gals

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(S) DURATION

Days Enroute to Area (Barrier)	8
Days North of Barrier	43
Days Enroute Fremantle	5
Days Submerged	32

(T) FACTORS OF ENDURANCE REMAINING

<u>Torpedoes</u>	<u>Fuel</u>	<u>Provisions</u>	<u>Personnel Factor</u>
15	2355	15	15

Limiting Factor This Patrol: Fuel

FC5-16/A16-3
Serial # 0331

(Es)

SUBMARINE SQUADRON SIXTEEN

C-O-N-F-I-D-E-N-T-I-A-L

U.S.S. RASHER, Flagship,
8 June 1944.

FIRST ENDORSEMENT to
CO USS COD Conf. Ltr.
SS224/A16-3 Serial 02
dated 1 June 1944,
Report of 3rd War Patrol.

From: The Commander Submarine Squadron SIXTEEN.
To : The Commander-in-Chief, UNITED STATES FLEET.
Via : The Commander Submarines, SEVENTH FLEET.
The Commander SEVENTH FLEET.

Subject: U.S.S. COD (SS224) - Report of Third War Patrol -
Comments on.

1. The third war patrol of the U.S.S. COD was conducted during the period 6 April to 1 June 1944 in the SULU SEA and in the SOUTH CHINA SEA off the coast of LUZON. The patrol was of fifty-six days duration with forty-three days spent north of the Barrier.

2. The COD was only able to get into position for one torpedo attack. This attack was on a convoy of at least thirty-two ships, including escorts. The convoy was chased and tracked for three and one-half hours and then a submerged periscope attack was made about twenty minutes after sunrise. Just prior to firing the convoy zigged and gave the COD a stern tube set-up on a destroyer. With deliberation the COD waited until the range had opened and then fired three torpedoes at the destroyer with 40 - 50 degree gyro angles, observing two hits. Periscope observations were then taken and fire from bow tubes was undertaken on two ships. Both ships were hit and one hit was obtained in another ship in the far column. Out of nine torpedoes fired the COD obtained seven hits. After this attack the COD was forced down and obtained a severe depth charging.

3. The COD returned to port after a strenuous patrol in excellent material condition which reflects further credit to the Commanding Officer and crew for ability and pride in the upkeep and appearance of their vessel. Conversion of #4 Main Ballast Tank to a reserve fuel tank will be accomplished during this refit. It is regretted that there is no replacement trim pump available for installation at this time.

4. The Squadron Commander congratulates the Commanding Officer, officers and crew on the damage inflicted.

C. S. Isgrig
C. S. ISGRIG,
By direction.

FE24-71/A16-3

UNITED STATES NAVY

12/gr

Serial: 0585

17 June 1944

C-O-N-F-I-D-E-N-T-I-A-L

SECOND ENDORSEMENT to:

CO USS COD Conf. Ltr.
SS224/A16-3 Serial 02
dated 1 June, 1944.
Report of Third War
Patrol.

7 01561

From: The Commander Submarines, SEVENTH FLEET.
To : The Commander in Chief, UNITED STATES FLEET.
Via : The Commander SEVENTH FLEET.
Subject: U.S.S. COD (SS224) - Report of Third War Patrol -
Comment on.

1. The comments of Commander Submarine Squadron SIXTEEN are complete and concurred in.
2. This patrol is designated successful for purpose of award of the Submarine Combat Insignia.
3. The Force Commander takes pleasure in congratulating the Commanding Officer, Officers, and Crew of COD for having inflicted the following damage on the enemy:

SUNK

1 - DD (KAMIKAZE CLASS) (EC)	1,270 Tons (1st attack)
1 - AK (ASOSHIMA MARU TYPE) (EC)	8,812 Tons (1st attack)
Total	10,082 Tons

DAMAGED

1 - AP (KASADO MARU TYPE) (EC)	6,003 Tons (1st attack)
1 - AK (BRISBANE MARU TYPE) (EC)	5,423 Tons (1st attack)
Total	11,426 Tons

Grand Total 21,508 Tons

R. W. Christie
R. W. CHRISTIE.

DISTRIBUTION:

Cominch	(3)	- (Direct)	<u>ORIGINAL COPY</u>	S/M School NL Conn (2)
Vice Opnav	(2)	- (Direct)	*Each S/M W...	(1)
Vice Opnav Op-23c	(1)		*NOT TO BE TAKEN TO	
Com1stFlt	(1)	CTF-71	(4)	SE. - BURN
Com2ndFlt	(1)	CTF-72	(2)	
Com3rdFlt	(1)	CSS-12	(1)	
Com7thFlt	(2)	CSS-16	(1)	
ComSubs1stFlt	(4)	DivComs Ron-12	(1)	P. F. <i>Stranahan</i>
ComSubs2ndFlt	(4)	DivComs Ron-16	(1)	P. F. STRANAHAN, JR., Flag Secretary.

UNITED STATES FLEET
COMMANDER SEVENTH FLEET

A16-3(F-3/roj)

4 JUL 1944

Serial: 01776

C-O-N-F-I-D-E-N-T-I-A-L

THIRD ENDORSEMENT to
CO U.S.S. COD conf. ltr.
SS224/A16-3 Serial 02
dated 1 June 1944.

Report of Third War Patrol.

Reg. No. DM-9405
R. S. No. 01561

From: The Commander, SEVENTH FLEET.
To : The Commander-in-Chief, UNITED STATES FLEET.
Subject: U.S.S. COD (SS224) - Report of Third War Patrol.

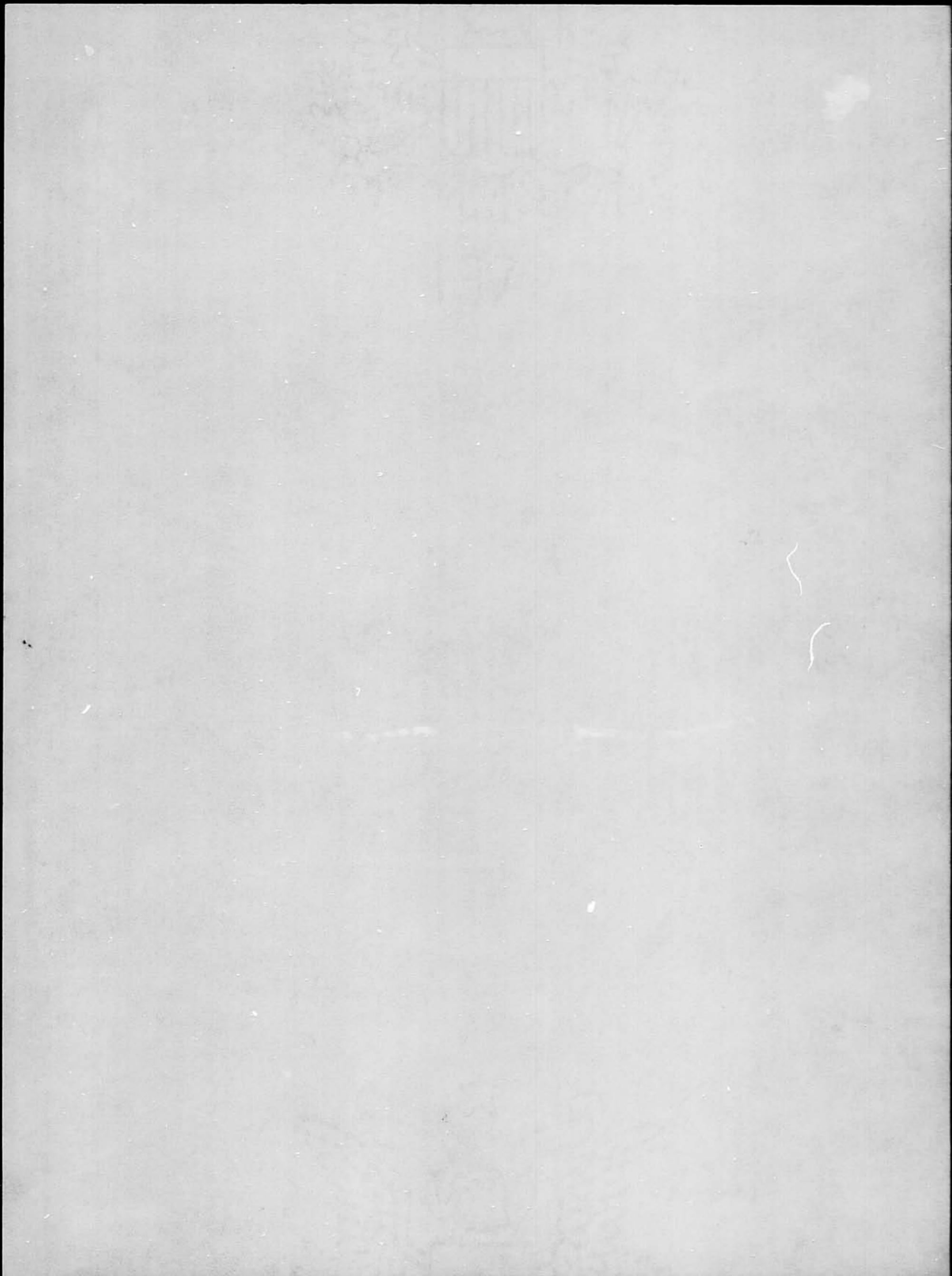
1. Forwarded.
2. The Commanding Officer, Officers, and Crew of the U.S.S. COD are congratulated for having conducted a successful war patrol.

T. C. Kinkaid

T. C. KINKAID

Copy to:

CTF-71
CTF-72
ComSubRon-16
CO U.S.S. COD



1ST COPY

5224/A16-3
Serial (03)

U.S.S. COD (SS224)
c/o Fleet Post Office,
San Francisco, California.

DECLASSIFIED

25 August 1944

From: The Commanding Officer.
To: The Commander in Chief, United States Fleet.
Via: (Official Channels)

Subject: U.S.S. COD (SS224), Report of War Patrol No. 4.

Enclosure: (A) Subject Report.
 (B) Track Charts (for Task Force Commander only).

1. Enclosure (A), covering the fourth war patrol
of this vessel conducted in MANILA and CELEBES areas during the
period 3 July 1944 to 25 August 1944 is forwarded herewith.

J A Adkins
J. A. ADKINS.

DECLASSIFIED-ART. 0445, OPNAVINST 5510.1C
BY OP-0989C DATE 5/25/72

DECLASSIFIED

91032

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(A) PROLOGUE

Returned FROM ATLANTIC, A. from 3rd war patrol 1 June 1944. Refit by SubDiv 162 Relief Crew and ORION. Comdr. J. C. DEMPSEY, USN., Commanding Officer, detached 15 June 1944. Five days' practice approaches and torpedo firing. Departure delayed by material casualty.

(B) NARRATIVE

3 July 1944

- 1310 Underway from alongside ORION in accordance with CTG 71.1 Secret Op. Ord. assigning patrol area west of VERDE ISLAND PASSAGE.
Conducted deep dive and training exercise with CABRILLA and HORNET.
- 2320 Made rendezvous with CABRILLA and SANDANCE; enroute SOUTH GULF.

4 July 1944

- 3 training dives. Submerged approach on CABRILLA Radar tracking drill. Passed GUNNEL and LUSKAL-LUNG southbound.
- 1517 SD picked up friendly PBY at 12 miles. A/C Contact #1.

5 July 1944

- 7 training dives. Submerged approach and submerged radar approach on CABRILLA. Passed NAMAI southbound. Talked to CABRILLA by hand-keying.

6 July 1944

- 0622 SD contact, friendly NIGHTHAWK at 7 miles. A/C **Contact #2.**
- 0812 Roored alongside SANDANCE in northern part of SOUTH GULF; commenced fueling from SANDANCE. CABRILLA left.
- 1006 Underway; calibrated sound heads on SANDANCE.
- 1053 Anchored. SANDANCE left. Conducted drills in hand diving.
- 1140 Underway for Lombok Strait via bombing restriction lane. 2 training dives. Due to suspected enemy submarine activity in vicinity of bombing restriction lane, CABRILLA thought it best to forego training services to each other and to proceed independently to LOMBOK. Set rendezvous north of LOMBOK, so that CABRILLA and COD may more effectively cover MAKASSAR on route north.
- 2055 SJ radar interference, believed to be HORNET southbound.

CONFIDENTIAL

7 July 1944

3 training dives. 1 battle problem.

0407 SJ radar interference; no pip. Exchanged calls by handkeying with CABRILLA.

8 July 1944

4 training dives. 1 battle problem. Exchanged calls by hand-keying with CABRILLA.

9 July 1944

0546 Dived.

0648 Surfaced.

0815 Stopped #1 main engine because of knock. Discovered #4 conn rod bearing burned out; crank-pin journal badly scored. Pulled unit; disconnected conn rod; blocked up piston; continued using engine on 15 units.

1155 Raised BALI PEAK.

1411 Submerged to close strait.

1848 Surfaced. Radar had short contact with SJ interference bearing 233T, range 7,900 yards. Could not get answer by hand-keying. Possibly CABRILLA or JACK surfacing.

1955 SJ interference from NUSA BEAR and from SW tip of LOMBOK ISLAND. Lights observed on hill on NUSA BEAR.

2025 Entered Strait.

2050 Radar contact 017T, 11,120 yards. Contact #1. This contact was at first circling, then came to a zig zag patrol course of 300 to 350 T, speed 8 knots, constant helm. Ran with him for a while, closed to 5600 yards, made tubes ready, got a look at him, and went around his stern. He appeared to be a patrol craft of about PC size.

2128 Moonrise - very bright.

10 July 1944

In JAVA SEA.

0502 Raised SENALA ISLAND. Our rendezvous with CABRILLA is off this spot at 0600.

0547 Sailboat contact. Contact #2. Ran around in twilight.

0558 Exchanged signals by hand-keying with CABRILLA.

0608 Submerged.

0702 Surfaced.

0730 Sighted CABRILLA: closed; used line-throwing gun to pass over track chart for coverage of MAKASSAR STRAIT, with rendezvous for tomorrow. CABRILLA opened to westward.

0831 SD contact 6 miles, submerged. Plane not sighted. Could have been CABRILLA. A/C Contact #3.

1104 Surfaced.

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10 July 1944 (Cont.)

1240 Finished decoding PADDLE message (badly garbled) telling of a convoy with radar or D/F equipment on uncertain course, speed 10, north of CELEBES at 0330 H, this morning. We may have a chance at this convoy if it is headed for BALIKPAPAN. At 3 engine speed. Continued on track up MAKASSAR STRAIT.

11 July 1944

0125 SJ landfall on CAPE MANDAR.

0348 Sighted sailboat. Contact #3. Set course up west coast of CELEBES about 5 miles off beach. Could see beach plainly from bridge in moonlight. Numerous sailboats in sight, but nothing larger.

0419 Observed steady white light about half-way up mountain on CELEBES coast.

0532 Sighted sailboat. Contact #4.

0539 Sighted sailboat. Contact #5.

0541 Radar contact on sailboat. Contact #6.

0543 Sight and radar contact on sailboat. Contact #7.

0610 Sunrise. Had 5 sailboats in sight. Contact #8. Opened coast off CAPE ILLIAM.

0845 Sighted sailboat. Contact #9.

0855 At rendezvous for CAERILLA. Dived.

0958 Surfaced. Waiting for CAERILLA.

1053 Sighted sailboat. Contact #10.

1112 No CAERILLA; having waited the appointed time, left rendezvous; set course for 100 fathom curve NE of BALIKPAPAN, where it runs 12 miles off beach.

1609 Sighted sailboat. Contact #11.

1801 Sighted sailboat. Contact #12.

2036 Left BALIKPAPAN area; headed for middle of MAKASSAR STRAIT off MANGALIAT.

12 July 1944

In MAKASSAR STRAIT as before.

0041 Phantom pip on SJ. Probably atmospheric.

0440 Cleared MAKASSAR STRAIT. Headed north, intending to arrive off minefield at TALIMAN by afternoon.

0627 Forced down by plane. A/C Contact #5. Visual contact, close aboard.

0729 Surfaced.

0740 Forced down by plane. A/C Contact #6. Visual contact, close aboard.

0845 While at 50 feet making SD search preparatory to surfacing, picked up radar interference.

CONFIDENTIAL

12 July 1944 (Cont.)

- 0959 Plane sighted in periscope. A/C Contact #7.
1719 Surfaced. Had given up idea of patrol off TARAKAN; set course for SIBUTU PASSAGE.

13 July 1944

- Enroute SIBUTU as before.
0501 Submerged in middle of SIBUTU PASSAGE, between PAUK MATA and SIDUTU LSL ID. Periscope patrol. Rain for 2 hours in morning, but had land on both sides in plain sight during remainder of day and had excellent listening conditions. No contacts.
1900 Surfaced. Stood on through SIBUTU PASSAGE and west of PEILI ISL. 3 contacts on sailboats, #13, #14, & #15.
2034 Two bright lights from direction of ALFIELD POINT, BORNEO.

14 July 1944

- Enroute area in SULU SEA.
1341 Passed oil drum.
1430 Passed water-logged derelict sailboat, about 12' long with an 8' mast.
1533 Submerged for trim and BT card.
1546 Surfaced.
2003 Standing up CUYO EAST PASS. Transited this pass and APC EAST PASS with despatch during darkness, rain squalls, and poor visibility due to excellent work by Navigator Lt. Comdr. H. BISSELL, Jr., and radar operators of all three cruising sections.

15 July 1944

- Enroute as before.
0333 Discovered hole in elbow to #3 muffler. Noise and sparks.
0455 Submerged in APC EAST PASS between DISCOVERY BAN and DOIGON POINT. Stood up toward CAPE CALAVITE. No contacts.
1400 While routineing torpedoes, discovered a leak in the HP lead to the starting valve on MK 23 torpedo in tube #9. Reloaded tube. Commenced work on torpedo. Connection was soft-soldered and torpedo was loaded in tube by 1700 the following day. A makeshift repair but a very commendable piece of work by KELLY, William F., TM1c, USN.

16 July 1944

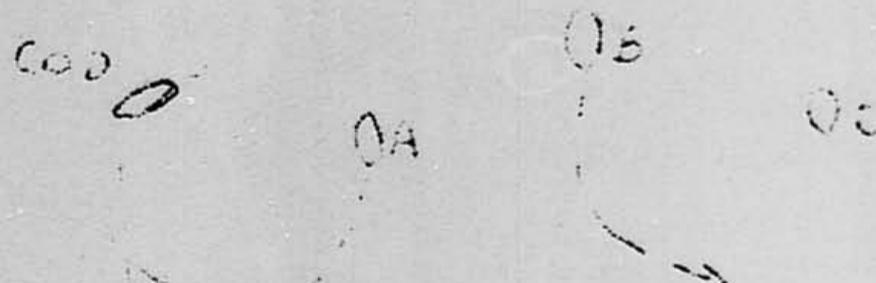
- Patrolling as before. No contacts.
0400 Stood out to westward toward spot for days patrol, west of BUSUANGA.
ATTACK #1
0510 Visual, followed by radar, contact at 11,000 yards, of three ships bearing 265 T. Contact #16.

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16 July 1944 (Cont.)

Beginning of twilight. Stood off and commenced end around. Targets moving to southward. Tracked targets by high periscope at full power. Base course 210 T, speed 8. In hurry to get ahead of targets before arrival of expected air cover.

- 0738 SD contact, 24 miles, closing. A/C Contact #8. We were almost ahead of targets now and there were no whitecaps. Submerged. Commenced approach. Target group consisted of 3 similar MFM steamers of about 2000 T. Similar to KEIZAN MARU, p. 143 of ONI 208-J revised, except that funnels were about 10' higher than shown in picture. Formation as follows:



- 0910 Fired 3 torpedoes at A and 3 at B. 87.2 to 99 track. Gyro angles 23.2 to 35. Average torpedo run 1600. B turned away. A turned toward in a wide circle.
- 0912 Fired 4 stern tubes at A and went deep.
- 0914 Received first of 14 depth charges.
Damage: Leak in circulating water sea valve #1 and #2 main engines. Leak in head outboard discharge valve. Squeal in #1 main motor. Ground in bow planes. Starboard sound training motor disarranged. Eight cables pushed in in control room. Starboard sound shaft universal joint loosened.
- 1035 Secured from depth charge. Reloaded.
- 1057 All clear by periscope.
- 1129 Surfaced. Smoke of 3 targets was in sight to SW. Commenced end around. Decided to shoot by night and use 4' depth settings or less.

~~CONFIDENTIAL~~

16 July 1944 (Cont.)

- 1405 Squeal in #1 motor increased in intensity and became a clattering sound. Stopped starboard shaft.
- 1422 Submerged to determine cause of noise in #1 motor. At 2/3 speed on port shaft at 100 feet. Working on #1 main motor, cleared round in bow planes, converted #4 fuel ballast tank to main ballast tank on this dive. Firing data was not too complete and approach was none too polished, but analysis of torpedo firing with available data showed that two hits should have been obtained on first target. Main motor trouble located in after bearing. Lifted, scraped, replaced.
- 1855 Surfaced. Headed on last bearing of targets on 3 engines and charging batteries on 4th.
- ATTACK #2
- 2307 SJ contact ahead bearing 216 T, 10,000 yards. Contact #17. Commenced tracking - it was our target group.

17 July 1944

Tracking targets as before.

We tracked these targets very carefully for 2 hours. Speed 8 knots (same as during previous attack) zigging mildly between 195 T and 240 T on 12 minute legs. Formation the same as before.

C.O. was determined to make this one very deliberately. Decided to shoot one target at a time, no divided fire. We worked up to port bow of formation, set torpedo depths at 3 feet (light, easy swells, no whitecaps) slowed to 10 knots, turned in to attack course, kept bow pointed at target, swung left slowly, opened outer doors and at

- 0015 Fired 3 on an 80° port track, torpedo run 1500, 3' depth setting, spread 1 1/3°, gyro angles almost 0°. This was a very careful attack, with TDC checking right on in range and bearing. C.O. watched the wakes of two torpedoes pass directly under the target. Recorded data checked very well on subsequent analysis of this attack. Target made no move. CO turned right and started pulling out on 3 generators from a range of 1100 yards. Would not use the engine with the sparking muffler. The escort started smoking heavily and chasing. At three generators we had the speed advantage on him. He fired a few rounds, the closest one hitting the water with a pink detonation about 30-50 yards on our port side (exactly on in range). His last shot was a shrapnel

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17 July 1944 (Cont.)

burst, yellow, about 300 feet high, short and to the right, about 300 yards on our starboard quarter. I found that if I ordered "clear the bridge" at the time of the gun flash, the lookouts would be in the conning tower by the time the shells burst. Altered course with 5° rudder at time of each

burst, chasing splashes.

0037 Escort went back to join other Marus. Commenced reload.

0127 Took northwesterly course along edge of DANGEROUS GROUP.

0136 Sent radio message to IAPON on 2800 Kcs. in aircraft contact code, classifying targets as 3 small merchant vessels, giving position, course, speed, and information that 3 foot torpedoes had been under target. Completed transmission by 0127, and obtained receipt. The decision to not pursue this target group further was a hard one to make. With the failure to obtain a hit with each torpedo fired, the Commanding Officer had become more and more anxious to destroy these small targets. The targets were still available even though thoroughly alerted. However, the approach just completed could not be bettered. Continuous TBT bearings and SJ ranges every 20 yards had been fed into TDC which had not been touched for 2 minutes prior to firing.

The only improvement in tactics that could be employed in subsequent attacks would be to decrease depth setting of torpedoes. Had two full nests of torpedoes left, plus one more, and felt that more damage could be inflicted on enemy by looking for larger targets.

It is felt that the MK 23 torpedoes with the 16-1 warheads ran deep during this attack. Record books show rudder throws of 2° up and 4° down.

0525 Submerged. Checked one torpedo for proper horizontal rudder throws and found in accordance with record book. Continuous periscope search.

1058 Surfaced. Commenced welding a patch over elbow on #3 muffler. This work continued until completed at 1520 with only one interruption, due to SD contact at 24 miles at 1232. A/C Contact #9. Credit for stopping the noise, and ingeniously quenching the sparking is due to Lt. Comdr. E. BISCHI, Jr.; Ensign Franklin S. KIBBELL, USN.; SLIM, James C., Chief (AA), USN.; and HUSTER, Robert J. MC, US.

2144 Decided to shift station to vicinity of CABIA ISLAND. Came to course 060 T at 3 engine speed.

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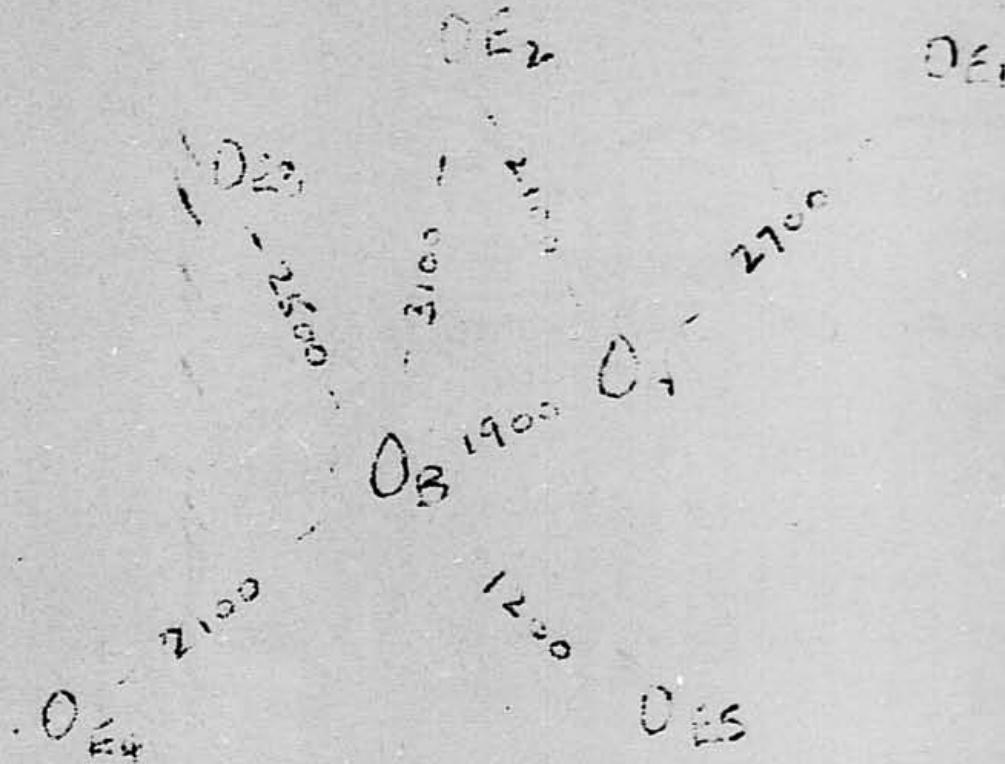
17 July 1944 (Cont.)

ATTACK #3

2154 SJ contact bearing 082 T, 23,400 yards. Contact #18. Went to 4 engine speed, and commenced tracking.

2205 Stopped; then reversed course as it became evident that target was on westerly course, instead of easterly, as had been at first supposed. Could not get more than 17.4 knots at 100% power.

Target group was making 19 knots on mean course of 240 T to 270 T. There were 2 large ships and five escorts in the formation, arranged as follows:



COD was up ahead on starboard bow of formation, trying to stay in front, tracking target A. Targets could barely be seen as haze spots from bridge, and their characteristics could not be distinguished.

2233 Target zigged left to course 235 T, putting us 4500 yards off starboard track. Shifted to escort E1 as target, came left to course 170 T for 115° track.

2237 Submerged to radar depth.

2239 Tracking of escort E1 showed that he had zigged back to right, headed toward us. Swung left to cut down gyro angles.

2239:50 From 40' depth, fired 6 bow tubes at escort, track 14-22 starboard. Depth setting 3'. Torpedo runs 2000-1700. Spread $\frac{1}{2}$. Started deep.

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17 July 1944 (Cont.)

- 2243:10 Heard one explosion, 3 minutes 20 seconds after firing first torpedo. This could have been a hit on a trailing escort.
2245:11 Two explosions.
2246:28 One explosion.
2246:54 One explosion. These last four could have been end-of-run explosions or random depth-charging.
2323 Surfaced. All clear by radar and sight, although both JP and QB could still hear targets. Set course for CABRA ISLAND at 1 engine speed. Analysis of this firing shows that firing was commenced too soon and that ship's head was swinging during firing. Rerun of problem on TDC however shows at least one hit on target.
2344 Discovered ground in #1 HP Air Compressor. Torpedo in tube #9 was flooded. (After nest had been made ready except for opening after doors.) Two gallons water removed from afterbody and $\frac{1}{2}$ cup from gyro. Same torpedo that had leaky HP lead to reducer. Gave treatment.

18 July 1944

- 0125 Commenced transmitting COD ONE on 8470 Kcs, telling of this task force. Completed transmission by 0130. Authenticated at 0141. VIXO answered immediately and no repeat groups were requested.
Underway enroute CABRA ISLAND in intermittent rain squalls with SJ watch set all day.

19 July 1944

- 0500 Submerged. Closed CABRA ISLAND to $5\frac{1}{2}$ miles and patrolled to westward of it. Heavy swells and whitecaps from SW. Had to use negative twice during periscope observations.
1724 Surfaced. Opened CABRA ISLAND.
2011 Stood up off western approaches to MANILA.

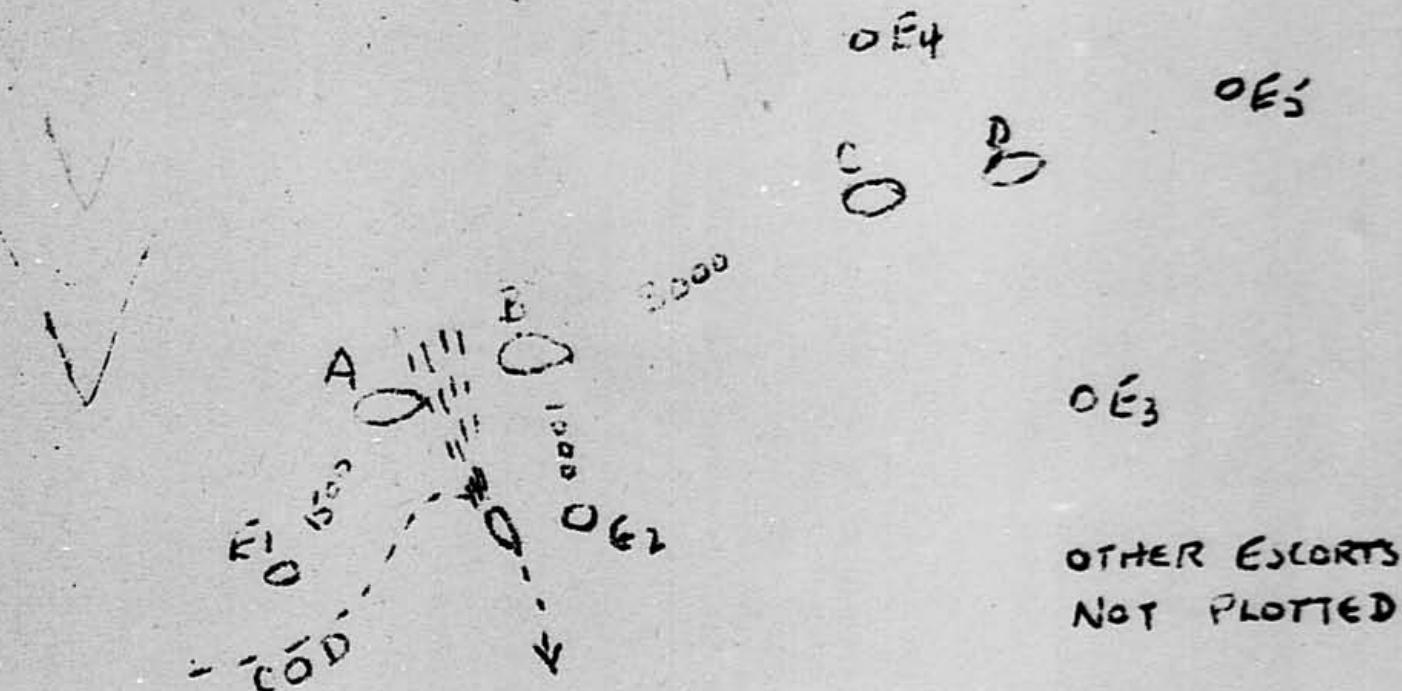
20 July 1944

- Patrolling as before, west of MANILA BAY. Dark, wind, rain, occasional lightning, heavy seas from SW.
ATTACK #4.
0258 SJ contact bearing 012 T, 21,000 yards. Contact #19. Commenced tracking. Target group consisted of 4 large pips with 5 or more escorts, standing down on a southerly course at 9 knots.
0336 Target group changed to easterly course, zigzagging between 075 T and 140 T, heading for MANILA.

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20 July 1944 (Cont.)

FORMATION:



Morning twilight at 0518. Sky was beginning to lighten in east by time COD had pulled up to beam of after group. Haze and rain. Picked target A and commenced maneuvering for stern tube shot.

- 0432 Commenced cutting in ahead of escort El who had pulled up toward target's beam. Closed target's track to 1100 yards, where we had target on our port beam and escort on our starboard quarter, turned right, slowed, and opened outer doors.
- 0444 Fired stern tubes at target A, 1350 torpedo run, 55 track, ship's head almost steady, gyro angles 189 $\frac{1}{2}$ to 195. Plot and TDC checked on course 105, speed 9. Depth setting 3 foot. OOD and JOOD caught glimpses of target during lulls in rain and during lightning flashes. Each estimated a ship of 4000-5000 tons.
- 0445 Ahead full, pulled clear of formation, crossing ahead of escort El.
- 0454 Submerged. Heard escorts pinging on about 17.6 Kcs. No counter attack.

Analysis of this attack shows that a 2 $\frac{1}{2}$ $^{\circ}$ spread was used between torpedoes 1 and 2 and that this was cut down to 1 $\frac{1}{2}$ $^{\circ}$ between subsequent torpedoes. This should have been consistent at about 2 $^{\circ}$, but, even so, 3 hits should have been obtained if the target was of length 300' or more. Radar bearings and ranges were used

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20 July 1944 (Cont.)

- to keep TDC set-up. TDC checked very well at time of firing. Recorded data checked well at analysis. It is felt that hits should and would have been obtained if sea conditions were not too bad for proper performance.
- 1252 Surfaced. Very heavy seas.
- 1404 Commenced transmitting COD TWO on 12705 Kcs. Completed transmitting at 1415. NPM answered first call-up and requested repeat of our call only. NPM authenticated at 1416.
- 1405 SD contact 23 miles. A/C Contact #10. This contact remained on the screen at various ranges for over an hour. Sky was overcast and cloudy with a few breaks in clouds near the sun.
- 1511 Contact had closed to 9 miles; submerged. Working on starboard sound training motor.
- 1823 Surfaced. Standing into APO EAST PASS in rain and heavy seas.

21 July 1944

Transitting APO EAST PASS.

- 0728 Submerged in CUY' ST PASS.
- 1822 Surfaced. Received orders to DARWIN.

22 July 1944

In SULU SEA. Passed through numerous rain squalls during day.

- 0658 Submerged. Fire control drill.
- 0811 Surfaced.
- 1107 and 1130 Passed through two large oil slicks in SULU SEA in Lat. 7-15 N., Long. 120-03 E.
- 1353 Sighted sailboat with square sail bearing 203 T. Contact #20. This was about 40 miles due north of PEARL BANK. Carefully avoided.
- 1632 Landfall by high periscope on DOC CAN ISLAND. Stood down slowly toward land until PEARL BANK LIGHT had been picked up by periscope.
- 1713 Submerged. Fire control drill.
- 1850 Surfaced. Stood down through passage between PEARL BANK and DOC CAN ISLAND. Maximum SJ range on PEARL BANK LIGHT was 14,000 yards.
- 2250 Stood through SIBUTU PASSAGE. There were no contacts of any sort throughout the night.

23 July 1944

IN CELEBES SEA. Numerous rain squalls.

- 0520 SJ interference on bearing about 165 T. Possibly PARGO.
- 0523 Submerged for BT card.
- 0608 Surfaced.
- 1252 Fire control drill.

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24 July 1944

Enroute in CELEBES SEA as before. Rain squalls.
0005 SJ landfall on SIAOE ISLAND.
0152 Passed through SIAOE PASSAGE.
0500 Submerged for BT card.
0556 Surfaced.
0602 SD contact 14 miles, closing. A/C Contact #11.
0603 Submerged. Fire control drill.
0948 Surfaced.
1001 SD contact 12 miles. A/C Contact #12. Submerged.
1808 Surfaced.

25 July 1944

In MOLUKKA PASSAGE.
0400 Discovered trim pump crankcase full of salt water and oil.
0552 Raised LIFUMATOLA ISLAND.
0638 Submerged. Commenced isolating cooling coil of trim pump. Decided to run submerged patrol today off NE tip of LIFUMATOLA. Spent entire day in attempting to close this point against the current.
ATTACK #5.
1358 Sighted smoke bearing 168 T, about 20,000 yards. Contact #21.
1400 Sighted float type plane "Pete" in vicinity of smoke. A/C Contact #13. This plane was not seen again.
1400 Commenced tracking smoke. We were not 8.5 miles off the NE tip of LIFUMATOLA. Assumed target was going to round the point close aboard, so set course to close the beach and head him off. Smoke developed through the periscope into a convoy of three AK's and four escorts, in the following disposition:

○ E3 = SC?

E4 - SC? C ○

○ E2 = AM 13

B ○ ○ A

○ E1 = CHIDORI

All three AK's were MFM steamers, with raised 1, 2, & 3 islands, composite superstructures, counter sterns, and high funnels. A & B had guns fore and aft. C had a gun aft only. B, the largest,

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25 July 1944 (Cont'd)

was similar to MAREI MARU on p. 128 of ONI 208-J Revised, and A was similar to SAMARANG MARU on p. 130. No tentative identification of C could be made, as it had a large mast on the No. 1 island, an illustration of which can not be found.

COD was well off to starboard of formation with one torpedo forward. Intention was to pass just ahead or astern of the CHIDORI (E1) and fire at target B. Target group passed close to beach, however, and we could not get closer than 6000 yards to any ship.

All four escorts were pinging on about 18 Kcs.

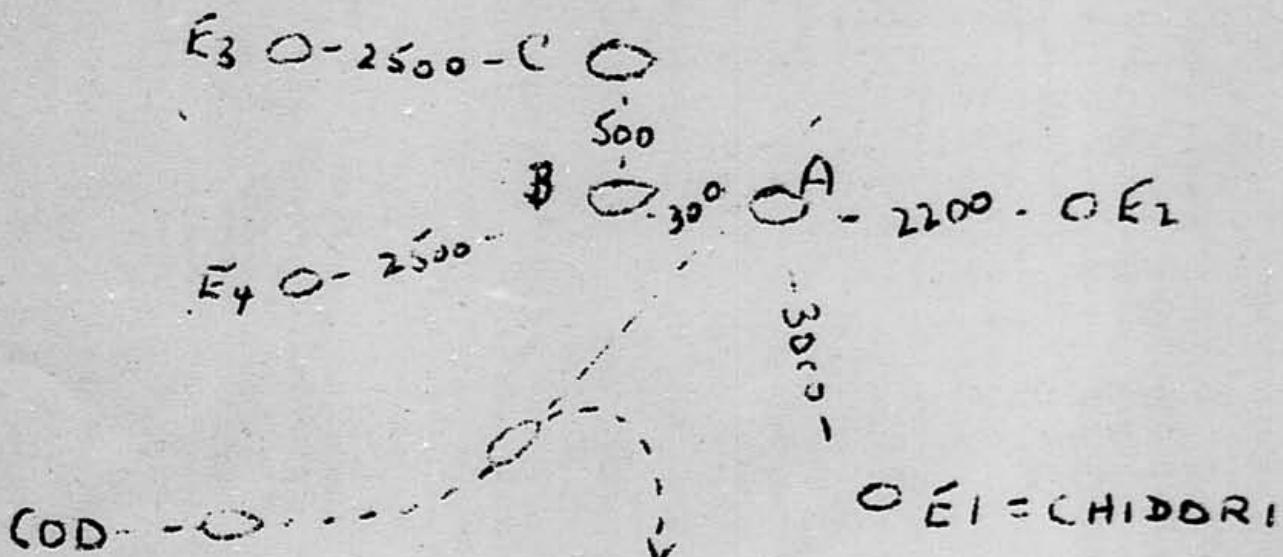
At one time when COD was making standard speed between looks, the CHIDORI shifted to hand keying, trained in our direction, and held key down. By the time we had slowed to 1/3 speed and had raised the periscope, he had resumed his regular pinging and turned back to rejoin his formation, showing us an 150° starboard angle on the bow. Range over 8,000.

Very good looks at the CHIDORI were obtained as the target group went by. The AM #13 was fairly well identified. Only the tops of the SCs were seen and their identification is questionable.

Target speed 8 knots. Course about 290 T.

- 1710 Smoke of targets disappeared.
1809 Surfaced. Chasing; charging batteries and air.
1930 Intercepted transmission in aircraft code on 2880 Kcs, apparently from wolf-pack off MANILA, distant about 1100 miles.
1943 SJ contact $233\frac{1}{2}$ T, 16,500 yards. Contact #22. Same target group. Bright moon in west. COD commenced trailing from astern at about 7,000 yards. Target formation:

MANGOLI ISL.



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25 July 1944 (Cont'd)

Base course 270 T, speed 7 3/4.

All escorts were patrolling stations. The CHIDORI on the starboard flank, in particular, would range out to about 5000 yards and then back, necessitating that we track him at times to be sure that he had not spotted us. The small escorts, E3 and E4 would sweep back and forth across the stern.

2132 Moonset. COD then closed the formation at one-generator speed and joined the screen, astern of the CHIDORI. 1½ minutes after a zig to the right COD swung left and at

2155 Fired torpedo at target B. 134.5 starboard track. Gyro 001 3/4, ship's head steady, torpedo run 3800. TBT bearings. Radar ranges. Two ships overlapping. Good set-up. Swung right and pulled clear on 2 generators, working up later to full speed on 4.

2157 2 minutes and 30 seconds after firing, explosion was heard below decks. Target turned on red mast-head light and flashed it vigorously. Target was tracked at speed $\frac{1}{2}$ knot by TDC. Radar target pip diminished in size. One escort commenced flashing a white light, either an all-around light, or one which was trained on COD. We did not reply.

2210 Observed 3 flashes of flame from direction of target.

2229 Radio heard tuning on 475 Kcs; no transmission.

2235 Set course for DARWIN.

2336 Lookout saw flash from direction of target.

All of the above adds up to a lot of circumstantial evidence from a ship that was very anxious to have a hit. No explosion was observed from the bridge, but a hit is claimed in ship similar to MAREI MARU on p. 128 of ONI 208-J Revised.

26 July 1944

In MOLUKKA SEA.

0435 Ran through patch of discolored water 8 miles off Southern tip of SANANA ISLAND, Lat. 2-25 S., Long. 126-11 E.

0605 Lookout sighted plane. A/C Contact #14. Submerged. This was just west of BURU ISLAND. Sky overcast.

0712 Surfaced.

0742 SD contact, 12 miles. A/C Contact #15. Submerged.

0852 Surfaced.

1005 SD contact, 16 miles, opening. A/C Contact #16. Pip faded out at 16½ miles.

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26 July 1944 (Cont'd)

1030 SD contact, 16 miles, closing. A/C Contact #17.

1034 Submerged.

1225 Surfaced.

1226 SD contact, 16 miles, opening. A/C Contact #18.

Faded out at 17 miles.

1335 SD contact 10 miles, closing. A/C Contact #19.

Submerged.

1440 At 65 feet sound operator heard loud noise which he identified as a torpedo. Went to 150'. Noise was not from within boat; probably fish.

1800 Surfaced.

2124 Commenced transmitting COD THREE on 8470 Kcs, giving time of arrival at Darwin and reporting last attack. Completed transmission by 2128.

VIXØ answered immediately and received at

2130. No repeat groups were requested. NPM

and Radio BELCONNEN also answered initial call-up.

27 July 1944

In BANDA SEA.

0058 Intercepted transmission in aircraft code on 2880 Kcs. from wolf-pack off Manila, giving position, distant 1200 miles. Strength four. Modulation excellent.

0838 Raised WETAR ISLAND.

1115 Raised GOENUNG API ISLAND.

1207 SD contact, 11 miles, closing. A/C Contact #20. Submerged.

1805 Surfaced.

2155 In passage between WETAR and ROMANG ISLANDS lookout sighted sailboat at 3100 yards. Avoided. Contact #23.

28 July 1944

0724 SD contact 13 miles, closing. A/C Contact #21. Submerged.

0825 Surfaced.

1225 SD contacts 19 and 20 miles. A/C Contact #22. Submerged. Fire control drill.

1413 Surfaced.

1648 Sighted float plane. A/C Contact #23. Submerged.

1741 Surfaced.

1826 #2 High Pressure Air Compressor out of commission due to failure of circulation water pump bearing.

2114 SJ radar interference. Probably BLUEFISH.

2244 Commenced transmitting COD FOUR on 8470 Kcs.

VIXØ answered initial call-up immediately. Heavy MCW jamming signals interferred with our reception of VIXØ, who was asking for repeats of certain

CONFIDENTIAL

28 July 1944 (Cont'd)

groups. Retransmitted. VIXØ received and authenticated at 2303. This message requested that complete circulating water pump for H. P. air compressor be delivered to DARWIN.

29 July 1944

0630 Raised MELVILLE ISLAND.
0652 Sighted HMAS M.L. 814, escort.
0805 Sighted BLUEFISH.
0840 Stood into DARWIN.
1058 Moored to Boom Jetty. Commenced loading 24 torpedoes, fuel, water, mail, and food. Section Base commenced welding patches on 2 main engine exhaust elbows. Made tentative plans with BLUEFISH for impromptu wolf-packing.

30 July 1944.

At DARWIN
1030 Shifted berth to Main Jetty.
1530 Transferred gunner's mate to Dispensary (gastritis).
1610 Captain John B. GRIGGS, U.S.N., ComSubRon 12, came on board. Received notification to OpOrd, assigning patrol area south and east of CELEBES.

31 July 1944

At DARWIN.
1810 Received H. P. Air Compressor parts.
1822 Underway in accordance with CTF 71 Secret Mailgram. Made trim dive. Made two night moonlight approaches surface and submerged on BLUEFISH. Acted as target for three runs by BLUEFISH.

1 August 1944

Underway as before in safety lane leaving DARWIN.
0225 Completed night training exercises with BLUEFISH.
0859 Made submerged approach on BLUEFISH and acted as target.
1644 Sighted plane. A/C Contact #24. Submerged.
1729 Surfaced. Set 4-generator speed.
1755 Exchanged calls with BLUEFISH. BLUEFISH suggested a wolf-pack on routes leading north from AMBON. Told BLUEFISH to proceed at best speed to patrol north from LIFUMATOLA ISLAND, and that COD was proceeding at four engines and would patrol east and south of same island.

2 August 1944

Underway as before on 4 main generators.
0713 SD contact 11 miles. A/C Contact #25. Submerged.
0802 Surfaced.

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2 August 1944 (Cont'd)

- 1129 SD contact 24 miles. A/C Contact #25. Contact closed to 23 miles, then opened and faded.
1445 SD contact 17 miles. A/C Contact #27. Contact faded at 14 miles; reappeared at 9 miles. Submerged.
1555 Surfaced.
1601 SD contact 12 miles. A/C Contact #28. Submerged.
1640 Surfaced.
1720 Raised BURU ISLAND.

3 August 1944

- Underway as before on 4 main generators.
0030 Raised LIFUM TOLI ISLAND. Rounded this island and made sweep to westward along north coast of MANGOLI.
ATTACK #6
0141 Sighted ship bearing 271.5 T, range 13,000 yards. Contact #24. Commenced tracking.
0148 Battle stations. Target proved to be 1 medium AK or AP-AK escorted by a small escort vessel. Escort was to forward of target. Zigging on 4-12 minute log. Very bright moon low in west. Flat calm sea. 7 knots. Course 275 T. Target had raised 1, 2, & 3 islands, MFM sequence, a fairly heavy block superstructure, raked bow, short and fairly broad stack. Heavy masts. Estimated tonnage 4000-5000 tons. Vessel was similar in appearance to PALAU MARU (p. 40, ONI 208-J, revised) but with higher 1 and 3 islands; it was also similar to SINSEI MARU (p. 101) but without goal posts and with higher 1 and 3 islands. C. O.'s estimate is 1 AK or AP-AK, (EU) 4500 tons.

In view of the brightness of the moonlight it was considered by everyone on the bridge (except C. O.) that the most practicable method of attack would be by end-around and submerged attack from ahead. The C.O. felt that it would be feasible to sneak up on the port quarter of the target to about 3500 yards, making use of the land background. When this position has been reached COD slowed and waited for target to zig to left. Target, however, sighted COD at about this time, signalled to escort, and commenced turn to right to investigate. COD started turn to right, hoping that target was executing a routine zig. When target came completely around and headed for COD, COD turned left and submerged to periscope depth. Target showed zero angle on bow and speeded up. Escort came over to starboard side of target. COD pulled off target's track to starboard and completed making ready stern tubes. Fed periscope bearings and angles on bow into TDC, no ranges attempted in the moonlight.

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3 August 1944 (Cont'd)

0225 Fired 4, spread by periscope, gyro angles 163 to 178, track angles 57 to 72, torpedo runs averaged 500 yards. Heard and saw three hits, completely enveloping target in black smoke; swung periscope to escort who was showing a zero angle on bow, impossible to judge range in moonlight. Went deep and headed for beach, gradually changing course to east and northeast.

Escort dropped 4 depth charges and indulged in considerable gunfire (heard by sound). Loud and unmistakeable breaking up noises from direction of target. No pinging by escort who soon left area on bearing 334 T. Escort screws were only screws heard.

0304 All clear by periscope. Large oil slick where target had been. Target gone. Escort had left.

0320 Surfaced. Circled through oil slick, much debris, lifeboat, and Japs in water.

0358 Pit log rodmeter struck debris and was bent, preventing withdrawal. Jettisoned and installed spare. Set course for LIFUMATOLA.

0445 SJ interference from south, across LIFUMATOLA. Probably BLUEFISH.

0511 Rounded LIFUMATOLA ISLAND.

0524 SJ contact with BLUEFISH. Exchanged c 11s.

0527 Sighted BLUEFISH. Closed and ranged close aboard. Warned him by megaphone of sinking in area earlier in morning; told him to watch point at eastern end of LIFUMATOLA; and that COD would work to southward, near tip of SANANA ISLAND. The decision to leave BLUEFISH at this point was governed by consideration of fuel, which was a critical factor for BLUEFISH, but not for COD.

0545 After speaking BLUEFISH, while still ranged close aboard, C.O. BLUEFISH pointed aloft and cleared bridge. A/C Contact #29. Bluefish and COD submerged. Plane not sighted.

After submerging, the rain clouds, which had been obscuring the land and had thus permitted this conversation on the surface, cleared away, leaving COD submerged in plain sight of beach and on BLUEFISH's patrol spot. Commenced working off the land to the southward, submerged.

1247 Sighted float plane "PETE" and masts of two ships through periscope. Bearing 177 T, range 16,000 yards. A/C Contact #30. Contact #25. Drawing to west. Went to normal approach course, full speed. Targets disappeared on course about 240 T, speed 7-9 knots. Escorting plane stayed in sight, climbing and covering a wide area. Assumed targets (a) were going to round southern tip of SANANA and head southwest, in which case we could

CONFIDENTIAL

3 August 1944 (Cont.)

- surface and catch them, or (b) were going to work up the east coast of SANANA and round LIUMATOIA to the eastward, which would follow the precedent set by our last two convoys and in this case would take them right over BLUEFISH. Commenced opening land again.
- 1524 Sighted patrol plane "LILY", bearing 001 T. A/C Contact #31. This plane apparently was not connected with our two ships.
- 1559 Surfaced; set out after ships.
- 1624 Sighted plane "RUFFE" bearing 228 T, 40 miles. All clear on SD. A/C Contact #32.
- 1638 SD contact, 11 miles, closing. A/C Contact #33. Submerged.
- 1746 Surfaced; set out in pursuit of ships again.
- 2004 Rounded SANANA ISLAND. Decided to investigate possibility of ships standing through MANGOLI STRAIT, so accordingly set course up west coast of SANANA ISLAND.
- 2103 Received message from BLUEFISH on 2880 Kcs. voice that unless otherwise directed he would depart at 0100. Acknowledged. This would give our last contact plenty of time to reach BLUEFISH, in case the convoy went north.
- 2226 Off western entrance to MANGOLI STRAIT. All clear. Commenced working along southern shore of MANGOLI to westward at 4 generator speed.

4 August 1944

- 0157 Reversed course to eastward.
- 0459 Submerged west of MANGOLI STRAIT. 3 miles off beach. Poor visibility at times during day.
- 0701 Sighted plane "RUFFE" bearing 079 T. A/C Contact #34.
- 0759 JP contact bearing 190 T. Nothing on QB. Planed up; nothing by high periscope. Identified as pit log motor.
- 0917 Sighted float biplane bearing 168 T. A/C Contact #35.
- 0947 Sighted float biplane bearing 285 T. A/C Contact #36.
- 1208 Sighted 4-engine plane similar to "MAVIS" bearing 000 T. A/C Contact #37.
- 1821 Surfaced. Set course for southern entrance to GREYHOUND STRAIT.

5 August 1944

- 0102 Arrived off anchorage (just west of GREYHOUND STRAIT) enclosed by GREAT SILVER, LITTLE SILVER, and MISEPEI ISLANDS. Lowered sound head (to listen for shoal noises), slowed to 3 knots, and surveyed

CONFIDENTIAL

5 August 1944 (Cont.)

- anchorage from 1 mile south of reef. All clear by radar and binoculars in moonlight.
- 0137 Commenced patrolling south of anchorage.
- 0459 Set course for SALABANGKA ISLANDS north of KENDARI.
- 0540 Sighted plane bearing 095 T. A/C Contact #38. Submerged.
- 0648 Surfaced.
- 0858 SD contact 30 miles. A/C Contact #39. Faded.
- 0915 SD contact 12 miles. A/C Contact #40. Submerged.
- 1021 Surfaced.
- 1108 Raised CELEBES coast.
- 1128 Sighted 2 sailboats. Contact #26. Avoided.
- 1154 Sighted sailboat. Contact #27. Avoided.
- 1222 Commenced patrolling off SALABANGKA ISLANDS.

6 August 1944

- 0506 Submerged. Investigated anchorage at UMBELI ISLAND. All clear. Do not believe anchorage north of this island would be used by convoys. Commenced patrol NW of this island.
- 1424 Sighted small trawler bearing 262 T standing out of western end of SILBINGKA STRAIT via channel northwest of PAPIDO ISLAND. Contact #23. MFM with large bowsprit. After deck-house. Very similar to the typical SAN DIEGO tuna boat. Hoped he was leading out a convoy or going to meet one. Closed him and fell in astern. No pinging.
- 1530 Trawler disappeared to north.
- 1749 Surfaced. Ran search to north and west for trawler with no success. Returned to channel from which he had stood out.

7 August 1944

- 0451 Submerged off western entrance to SILBINGKA STRAIT. No contacts.
- 1824 Surfaced. Set course to patrol across GREYHOUND STRAIT.
- 1830 Gyro compass out of commission while pumping up low vacuum in south rotor. Back in commission at 2154.
- 2044 SJ contact bearing 024 T, 9400 yards. Contact #29. This target when first picked up was steaming on a westerly course then came to north, east, and south. Speed 6 knots. Pinging. Concluded he was the trawler which had been sighted yesterday, or another A/S vessel patrolling between SILBINGKA and GREYHOUND STRAIT. He

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7 August 1944 (Cont.)

eventually settled on base course about 175 T, heading for KENDARI. Chased him and closed to where he could be seen from bridge in bright moonlight. Appeared small. Small radar pip. Ceased tracking and let him go. JOOD wanted to shoot him. Perhaps he was right.

8 August 1944

0141 Broke off from target above. Decision not to shoot this target with torpedoes was governed by his small size and his peculiar actions when first sighted.

Set course for surface patrol across southern approaches to GREYHOUND STRAIT.

0538 Lookout sighted sailboat bearing 094 T. Contact #30. Avoided.

1430 Plankton.

9 August 1944

Patrolling east of KENDARI.

0826 Interference on SD radar.

0858 SD contact, 7 miles. A/C Contact #41.

0947 Surf. ced. Started working down toward BUTON PASSAGE.

1500 SD contact, 22 miles. A/C Contact #42. Faded.

1545 SD contact, 16 miles. A/C Contact #43. Faded at 17.5 miles.

1836 Flashing light on BUTON ISLAND.

1850 SJ contact bearing 225 T, 7500 yards. Contact #31. This contact was in the middle of the northern end of BUTON PASSAGE, making 6 knots, back and forth across the entrance. Ran around to westward.

1939 SJ contact bearing 106 T, 6650 yards. Contact #32. Following same tactics as above contact. To avoid being sighted we were forced over to the limit of the deep water, 2200 yards from the beach.

2016 SJ contact bearing 198 T, 5600 yards. Contact #33. Ran around this one to the eastward. BUTON PASSAGE is the best patrolled of any strait we have seen on this patrol.

2041 Followed shore of BUTON ISLAND and headed up to GULF of BONI.

10 August 1944

Patrolling across route from SALEHL STRAIT to TICRO STRAIT.

0547 Submerged for BT card.

0632 Surfaced.

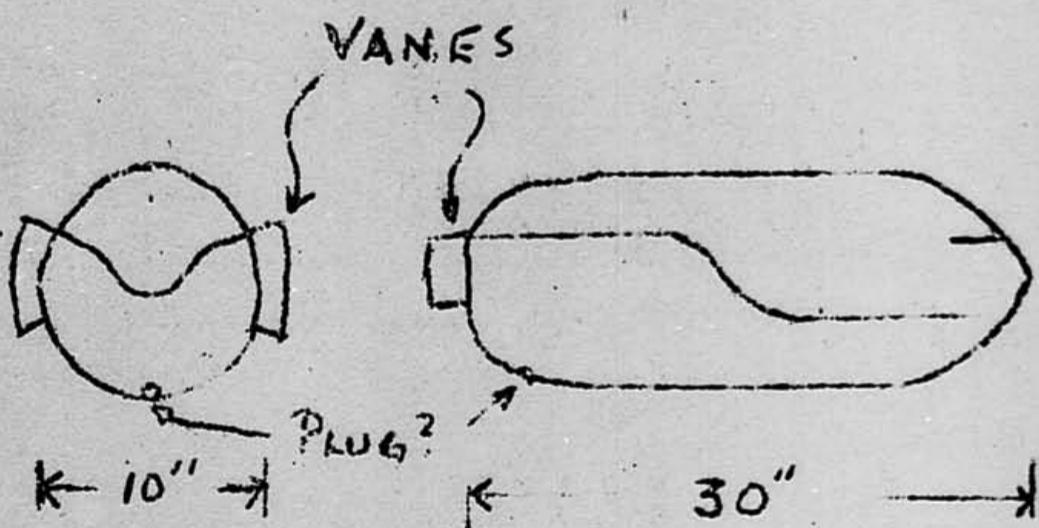
ATTACK #7

0930 High periscope sighted msts bearing 295 T, 20,000 yards. Contact #34. Worked around to

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10 August 1944 (Cont'd)

- position ahead of target. Course 072 T, speed 7.5 knots. Yawing, but apparently not zigging. MFM steamer, raised 1, 2, & 3 islands, block superstructure. Could not identify. Obtained prisoner who may be able to amplify through an interpreter, but C.O.'s estimate is small AK or naval auxiliary (EU), 2000 tons.
- 0942 SD contact, 20 miles. A/C Contact #44. Faded.
- 1018 SD contact, 30 miles. Land (KIBAENA ISLAND).
- 1039 Submerged ahead of target. Commenced approach.
- 1144 Fired 4 bow tubes, 92.5 to 99.5 track, 1400 yard torpedo run, gyro angles 004.5 to 011, spread by periscope. Saw and heard 3 hits. Target disappeared from sight almost at once, leaving a cloud of white smoke. Breaking up noises. Photographed smoke.
- 1156 Surfaced. Oil slick, much debris, boxes, 3 life rings painted in alternate red and white segments, and one notebook about 5" x 8" in water. There were about 24 objects floating in water which had the appearance of empty water-bombs. Sketch (from memory):



- They appeared to be made of sheet metal. All were avoided by COD. Flooded down and attempted to salvage notebook; it sank before being reached.
- 1159 SD contact 20 miles. A/C Contact #45. Closed, then opened to 22 miles and faded.
- While examining wreckage a head was noted popping up from a large floating box. Closed and found man inside. He was glad to be rescued; made him prisoner. Placed under care of PhM.
- 1306 Set course for SALEIER STRAIT having been pulled over to eastward. Resumed patrol.

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10 August 1944 (Cont'd)

0018 Submerged. Rigged #4 F.B.T. as ballast tank and
0028 flushed out.

0051 Surfaced. Patrolling as before.

ATTACK #8

2215 SJ contact 080 T, 10,000 yards. Contact #35.

Commenced tracking. Target was on base course
265 T, speed 9, heading for SALLIER STRAIT.

Zigging about 5° on either side. Engines aft.

Mast forward (observed while he was sinking
with bow out of water). No other identification
secured. C.O.'s estimate: Unidentified (UN).
About 4000 T. Officer at the periscope during
the shooting judged it was smaller.

2243 Started in for surface attack.

2252 Fired 4 bow tubes, 67.5 to 70 track, 359 to 002.5
gyro angle, average torpedo run 2100 yards.

Saw and heard one explosion at target's bow.

2257 Heard and felt a tremendous explosion which shook
the boat. Target showed flashes and flares,
turned to course 320, was tracked at 10 knots for
a few minutes, then slowed to 6, worked up to 8,
showered sparks from his stern, and commenced
zigging on base course 285. Target appeared to
be down by bow; this was later verified through
periscope.

2300 Commenced reload and end-around.

2356 Submerged. Radar and periscope approach.

11 August 1944

0019 Fired 4 bow tubes. Track angle 94 to 101.2.

Gyro angles 354 to 002 $\frac{1}{4}$. Spotted by periscope.
Average torpedo run 1100 yards. Heard and saw
one hit. Target was observed to sink by stern,
bow finally going under at 0040.

0025 Explosion.

0027 Explosion.

Commenced reload, and retuning after nest which
had been made ready. Torpedo in tube #8 had
gyro flooded and 8 gallons of water in afterbody.
Gave treatment. Subsequently, on 14 August,
this torpedo was heard by sound to run normally.

0138 Surfaced. Set course for southern tip of SALLIER
ISLAND.

0254 SJ contact bearing 172 T, 4050 yards. Contact
#36. Tracked at 2 knots. Assumed to be sail-
boat. Avoided.

0519 Submerged. Periscope patrol at southern tip of
SALLIER.

0738 Sighted sailboat bearing 308 T. Contact #37.
Avoided.

0956 Sighted two sailboats bearing 180 T. Contact
#38. Avoided.

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11 August 1944 (Cont'd)

- 1849 Surfaced. Set course up GULF of BONI to patrol routes from SALLEIER STRAIT to TIORO TRAIT.
2246 SJ contact bearing 082 T, 4900 yards. Contact #39. Sailboat. Went on by.

12 August 1944

- Patrolling in GULF of BONI.
0554 JOOD sighted unidentified monoplane, 8 miles. A/C contact #46. Submerged.
0701 Surfaced.
1554 Set course for eastern part of area.

13 August 1944

- 0735 Submerged for BT card.
0802 Surfaced.
0915 JOOD sighted possible periscope feather bearing 170 relative, 1000 yards. Evaded at full speed on surface. Contact #40.
GUN ATTACK #1
1341 Lookout sighted smoke bearing 256 T, 20,000 yards. Contact #41. Commenced tracking from ahead with high periscope. Base course 055. Zigging from 030 to 090. Heading for AMBON from vicinity of TUKANG BESSI ISLANDS (SE of CELEBES).
1509 Submerged ahead of target. Started approach. Target identified as a two-masted landing barge. Could make out only one gun, on bow, which was judged to be of about 20 mm size. Could not obtain ping range at stadiimeter range of 2200 yards.
1639 Let target go by and set battle surface stations for 4" gun.
1633 Battle surface. TDC range 6000 yards. Initial radar range turned out to be 11,000 yards. Fired 22 rounds. Target zigged violently and smoked heavily from funnel (black smoke). Crossed target and scored 3 close overs, one in deflection, 1 possible hit.

At range about 9300, target fired a gun from stern. Splash 250 yards short. Gun estimated to be of 3"15 calibre from range and size of splash. Cleared deck. Target fired again. Put rudder 10° left and waited for fall of shot. Swing was well underway by time of splash. Splash 150 yards short, broad on starboard bow. Range 9130. Good shooting.

- 1644 Submerged. Followed target.

Analysis: Range error on surfacing indicated a mast-head height of about 55'. (We had used 30'.) Target speed worked out as 12-14 knots. As viewed from deck and bridge, target was a good-size ship, comparable to our LSTs. Long and narrow. Shallow bow, fitted with a ramp. Light high speed

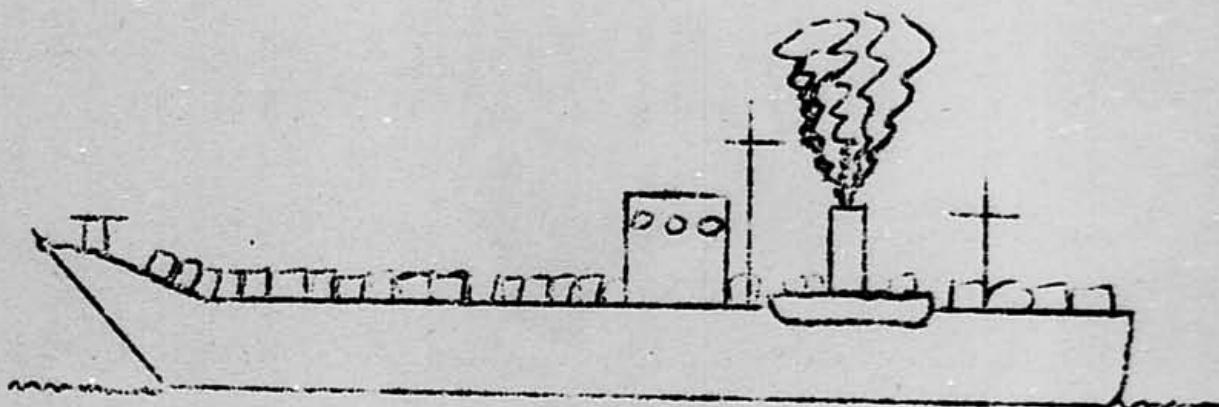
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13 August 1944 (Cont'd)

screws. Steam driven. Gray color. Bridge similar to that of a submarine. Two masts. Size and range of gun indicated a good-size ship. Observed heavy deck load. Enemy gun flashes were of a deep reddish tinge, rather than orange. Both splashes white. Decided to attack with torpedoes by moonlight.

No identification data for this craft on board.

Sketch (from memory):



Subsequently this ship was picked up by SJ radar at range of 22,000 yards, which apparently justified decision to use torpedoes.

- 1732 Surfaced; target out of sight on bearing 030 T; last course 020 T. Chased at 100% power.
1739 Smoke from target. Haze to northward.
1757 Sunset. Chased on last bearing for one hour. No contact. Commanded search from the flank, covering target's courses from north to east, speeds 12 to 14. COD speed 17. Intended to follow retiring search curve to target's 0039 circle and to then patrol across approaches to AMBON.
2143 SJ contact on target bearing 126 T, 22,000 yards. Contact 42. Tracked target and made end-around. Target speed 12.8 to 13.1 knots. Base course 065, zigging from 040 to 090.

14 August 1944

- 0134 Submerged to radar depth. 4 torpedoes forward, 4 aft. Maneuvered for stern tube shot.
0140 Moonrise. Moon was obscured; stayed at radar depth until after shooting.
0155 Fired 4 torpedoes. 120 to 136 track. Average torpedo run 1090 yards. Gyro angles 200.5 to 184. Radar ranges. Spread by periscope. Target had just zigged. Saw and heard 3 hits. Stern was blown off. Bow remained afloat,

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14 August 1944 (Cont'd)
smoking, until 0207 when it was seen to sink through periscope.

0201 Heavy explosion. Breaking up noises. Long-continued, rapid, persistent and extraordinary explosions from target, of varying intensities. Apparently ammunition in cargo.

0220 Surfaced. Circled spot of sinking. Propulsion on battery. Heard explosions continuing from sunken target. Debris, possible lifeboat, large oil slick on surface. Strong odor of fuel oil. Moonlight.

0233 Cleared area to southward, working to westward to round BURU ISLAND.

0526 Submerged in unrestricted bombing area. Routined torpedoes. Inspected engines. Periscope patrol.

1620 Surfaced. Wheats. Set course to patrol across pass between BURU and SAVANA ISLANDS.

1936 SJ contact bearing 001°, 6250 yards. Contact #43. Tracked on course 210 T, speed 5. Closed. Very small through binoculars. Avoided.

15 August 1944

0214 Set course for patrol across route from MANIPA STRAIT to LIFUM TOLA.

0244 SJ contact bearing 055 T, range 1250. Tracked at speed 0. Probably a log.

0541 Submerged for BT card.

0624 Surfaced.

0720 SD contact 7 miles, closing. A/C Contact #48.

0730 Submerged.

0832 At 50'. Interference on SD.

0930 Surfaced.

0933 and 0950 Interference on SD.

1222 Interference on SD, followed by SD contact 4 miles. A/C Contact #49. Submerged.

1334 Surfaced.

1414 SD contact, 6.5 miles. A/C contact #50. Submerged.

1534 Surfaced.

1700 Set course to northward, intending to round LIFUM/TOLA and work in northern part of area.

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15 August 1944 (Cont'd)

Analysis: If the contact is heading west for KENDARI (as first reported) or should head east for AMBON (which is a shorter run) we are too far behind to catch him. If he should be heading south (as once reported, and is run between positions would indicate) there is no probable destination other than DILLI or KOPENING. We will be able to overtake him only if he is headed in a southerly direction. Accordingly, set course for northern entrance to CMBII PASSAGE.

16 August 1944

- 0222 SJ interference bearing 150 T. Prob bly HKE. No sign ls received.
1019 SD contact, 10 miles, closing. A/C Contact #51. Submerged.
1126 Surfaced.
1145 High periscope sighted "EMILY" or MARTIN bomber bearing 075 T. Submerged.
1249 Surfaced.
2056 Commenced patrol back and forth between ALOR and WETAR ISLANDS. Noise and sparks from #2 M. E. muffler.

17 August 1944

- 0000 Set course for SALEIER STRIT area.
1525 Lookout sighted sailboat bearing 292 T. Contact #44. Avoided.
2035 SJ contact bearing 324 T, 6600 yds. Contact #45. Course 350, speed 3. Sailboat. Avoided.
2155 OOD and JOCD sighted a bright light bearing 358 T. Estimated range 8000 yards. Described as either a searchlight or flare. COD position: Lat. 6-17.0 S., Long. 121-50.5 E. Headed on bearing of light and ran for 6 miles. No contact.

18 August 1944

- 0210 Took up patrol across route from SALEIER STRIT to TIORO STRIT.
0602 Submerged for BT card.
0702 Sighted sailboat bearing 093 T. Contact #46. Sailboat on southwesterly course. OOD wanted to shoot this sailboat. Let him go by and get out of sight before surfacing. Would have done better to destroy it.
0932 At 50'. Interference on SD.
1020 Surfaced.
1443 High periscope sighted sailboat bearing 033 T. Contact #47. Avoided.
ATTCK #10
1631 Lookout sighted smoke bearing 312 T. Contact #48. Commenced tracking by high periscope. Northeasterly course. Speed 8.

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18 August 1944 (Cont'd)

- 1656 Lookout sighted sailboat bearing 000 T. Contact #49. From its appearance this was the same craft which had been sighted at 0702 (Contact #46). It was now 15 miles north (and cross-wind) of its position this morning. Lying to. COD made a run to eastward around this sailboat and then northeast to get ahead of smoke.
- Through the high periscope the smoking target could not be identified. A single tall funnel was sighted, elongated block superstructure, with an occasional glimpse of forecastle and bow. Target smoked continuously. Zigging from 050 to 070 at speed 8. Destination could be POMELAA or TIORO STRAIT.
- 1757 Sunset. As light began to fail in east, closed to track by radar.
- 1801 Interference on SD.
- 1930 Submerged to radar depth. Target not pinging. Fired 4 torpedoes forward. Started approach. When 1500 yards off track, target in sight through periscope, closing on an 80° starboard track, target turned on white light. Was about to go to periscope depth, when sound reported target's screws stopped. Stayed at radar depth and continued tracking. Target tracked on same course and speed for 3 sets of ranges and bearings.
- 2001 Fired 4 bow tubes. Track 57.7 to 61.2, gyro 338.7 to 342.2, average torpedo run 1595, radar ranges, periscope bearings, 1° divergent spread, off-set toward target's stern by 10°. No observed hits. No explosions heard. Target continued to track on same course and speed until torpedoes were due to hit. All torpedoes heard running normally by sound.
- 2002 Started deep.
- 2003 (Approx) Heard the rush of water usually accompanying an underwater explosion, but heard no explosion. Analysis: Recorded data checks very well. 2 hits should have been obtained if target had a length of 50 yards. If target was missed altogether (as seemed indicated at this stage of the proceedings) it was probably due to small size of target. C.O. believed that he had been drawn off to northward of SALEIER-TIORO direct route by a small heavy smoker.
- 2014 Two noises on JP, sounded like splashes.
- 2055 At periscope depth. Searchlight on port quarter.
- 2112 Surfaced. Radar picked up target, bearing thirty degrees to left of searchlight, range 5500. Target tracked as stopped. No radar pip on bearing of searchlight, but searchlight was not believed to be as far distant as the beach. This would indicate a rendezvous between our target and another vessel. Searchlight was turned on and off at

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18 August 1944 (Cont'd)

intervals. Target continued to plot as stopped.
No explanation. No damage claimed.
Torpedoes expended. Set course out of GULF OF
BONI.

19 August 1944

0053 OOD sighted a searchlight bearing 121 T. COD position: Lat. 5-49 S., Long. 121-39 E. Avoided. In conjunction with the light sighted at 2155 on 17 August, this could be taken to indicate some unexplained enemy activity off the western entrance to TIORO STRAIT.
0316 SJ contact bearing 198 T, 2250 yards. Contact #50. Sailboat. Avoided.
0525 Lookout sighted sailboat bearing 126 T, 1300 yards. Contact #51. Avoided.
0934 High periscope sighted sailboat bearing 142 T, 16,000 yards. Contact #52. Avoided.
1600 SD contact 10 miles, closed to 8.5. A/C Contact #53. Submerged.
1702 Surfaced.
2030 Entered OMBAI PASSAGE. Paralleled coast of ALOR at range of 6-7 miles. No contacts until fishing vessels in early morning. Sighted brush fires on TIMOR and large fire or volcano on southern point of PANTAR.

20 August 1944

0244, 0412, 0423 SJ contacts on sailboats. Contacts #53, #54, & #55. Avoided.
1651. OOD sighted plane, 5 miles. A/C Contact #54. Submerged.
1823 Surfaced.

21 August 1944

0405 Interference on SJ to southeast. Challenged by hand-keying at 0450 with no reply Possibly BLUE-GILL.
0605 Interference on SD.
0708 Commenced transmitting COD FIVE on 8470 Kcs. VIXØ answered initial call-up immediately. CW jamming by enemy, strength 3, not continuous, not effective. Repeated 6 groups. VIXØ received and authenticated at 0728. This message gave results of last 5 attacks and ETA FREMANTLE.

21-24 August 1944

Enroute FREMANTLE.

25 August 1944

Arrived FREMANTLE, W. A. Captain John B. GRIGGS, USN left the ship, to the regret of the entire ship's company.

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(C) WEATHER

No unusual conditions.

(D) (E) TIDAL INFORMATION
NAVIGATIONAL AIDS

No navigational aids or unusual currents were noted other than those covered in the sailing directions. While transiting OMBAI PASSAGE active volcano presumed to be DLAKI DLAMA on PANTAR ISLAND was observed from 35 miles distant. This was located on southern tip of island near TANJUNG BODO.

(F) SHIP CONTACTS

P - Periscope
R - Radar
SD - Surface Day
SN - Surface Night

No	Time Date	Lat. Long.	Type	Ihi- tial Range	Est. Cou- rse	Speed How	Con- tact- ed	Remarks
1	2050 7/9	08-46S 115-46E	PC	11,520	8	290- 350	R	Ran Around
2	0547 7/10	07-00S 116-23E	Sail	14,000	2	260	SD	Sub- merged
3	0348 7/11	03-23S 118-45E	Sail	6,750	1	135	SN	Avoided
4	0532 7/11	03-03S 118-43E	Sail	6,000	0	--	SN	Ignored
5	0539 7/11	03-03S 118-43E	Sail	3,250	0	--	SN	Ignored
6	0541 7/11	03-03S 118-43E	Sail	6,850	0	--	R	Ignored
7	0543 7/11	03-03S 118-43E	Sail	2,050	0	--	SN & R	Ignored
8	0546 7/11	03-03S 118-43E	Sail	8,000	0	--	SD	Ignored

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(F) SHIP CONTACTS (CONT.)

No	Date	Time	Lat.	Long.	Type	Ini-	Est.	Cou-	How Con- tact- ed	Remarks
						tal	Range	Speed rse		
9	7/11	0845	02-20S	118-27E	Sail	12,000	1	270	SD	Avoided
10	7/11	1053	02-13S	118-25E	Sail	12,000	1	270	SD	Avoided
11	7/11	1609	01-16S	117-54E	Sail	10,000	2	270	P	Avoided
12	7/11	1814	00-58S	117-50E	Sail	14,000	1	270	SD	Avoided
13	7/13	1941	04-41.5N	119-43.5E	Sail	2,500	--	--	R	Ignored
14	7/13	2056	05-01.5N	119-34.7E	Sail	3,950	--	--	R	Ignored
15	7/13	2124	05-08.0N	119-32.5E	Sail	1,100	--	--	R	Ignored
16	7/16	0510	12-53.1N	119-43.0E	AKs	11,000	8	210	SN	Attack #1
17	7/16	2307	11-10.4N	118-21.9E	AKs	10,000	8	210	R	Attack #2
18	7/17	2154	12-23.7N	116-31.8E	2 Heavies 5 Escorts	23,900	19	270	R	Attack #3
19	7/20	0258	14-22.1N	119-26.7E	4 Large 5 or More Escorts	21,000	9	200	R	Attack #4
20	7/22	1353	06-40.0N	119-38.8E	Sail	18,000	0	--	P	Avoided
21	7/25	1358	01-41.0S	126-32.3E	3 AM 1 TB 2 SCs	20,000	8	345	P	Attack #5
22	7/25	1943	01-41.5S	126-01.7E	Same as #21	16,350	8	280	R	Attack #5

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(F) SHIP CONTACTS (CONT.)

No	Time Date	Lat. Long.	Type	Ini- tial Range	Est. Cou- rse	Speed	How Con- tact ed	Remarks
23	2155 7/27	07-41S 127-10E	Sail	3,100	4	140	SN	Avoided
24	0141 8/3	01-44.8S 126-25.7E	1 AK 1 SC	13,000	7	270	SN	Attack #6
25	1247 8/3	02-45.0S 126-36.7E	2 Unk.	16,000	9	240	P	Chased Without Success
26	1128 8/5	02-50.3S 122-52.9E	2 Sail	16,000	--	--	SD	Avoided
27	1154 8/5	02-53.0S 122-48.0E	1 Sail	16,000	--	--	SD	Avoided
28	1424 8/6	02-51.5S 122-24.5E	Traw- ler	10,000	7	030	P	Chased Without Success
29	2044 8/7	02-48.4S 122-55.1E	Traw- ler ?	8,100	6	270	R	Tracked & Let Go
30	0538 8/8	02-38.7S 123-08.8E	Sail	12,000	--	--	SD	Avoided
31	1850 8/9	05-11.2S 123-19.0E	Patrol Boat	7,500	6	310	R	Avoided
32	1939 8/9	05-15.1S 123-10.5E	Patrol Boat	6,650	6	300	R	Avoided
33	2016 8/9	05-26.3S 123-12.1E	Patrol Boat	5,600	?	?	R	Avoided
34	0930 8/10	05-25.0S 121-07.9E	AK	20,000	7.5	072	SD	Attack #7
35	2215 8/10	05-43.0S 120-47.8E	AO	10,000	9	265	R	Attack #8
36	0254 8/11	05-50.6S 120-45.3E	Sail	4,050	2	350	R	Avoided

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(F) SHIP CONTACTS (CONT.)

No	Time Date	Lat. Long.	Type	Ini- tial Range	Est. Cou- rse	How Con- tact- ed	Remarks
37	0738 8/11	06-35.5S 120-36.0E	Sail	--	--	P	Avoided
38	0956 8/11	06-36.0E 120-36.0E	Sail boats	2 3,500	--	P	Avoided
39	2246 8/11	05-38.7S 121-06.0E	Sail	4,900	--	R	Ignored
40	0915 8/13	06-20.8S 124-24.9E	Peris- cope ?	1,000	--	SD	Evaded
41	1341 8/13	05-42.6S 124-51.8E	Landing Barge	2,000	13 055	SD	Gun Attack #1
42	2143 8/13	04-34.3S 125-47.1E	Landing Barge	22,000	13 065	R	Attack #9
43	1936 8/14	03-35.0S 125-43.1E	Patrol	6,250	5 210	R	Avoided
44	1525 8/17	06-40.0S 122-55.0E	Sail	18,000	--	SD	Avoided
45	2035 8/17	06-25.0S 121-57.5E	Sail	6,600	3 350	R	Avoided
46	0702 8/18	05-28.2S 121-07.9E	Sail	10,000	3 235	P	Avoided
47	1443 8/18	05-16.0S 121-05.0E	Sail	20,000	--	SD	Avoided
48	1631 8/18	05-25.4S 121-02.6E	Smoking Unident.	20,000	8 050	SD	Attack #10
49	1656 8/18	05-13.0S 121-03.0E	Sail Same as #46	14,000	0 --	SD	Avoided
50	0316 8/19	06-17.3S 121-57.3E	Sail	2,250	--	R	Avoided

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(F) SHIP CONTACTS (CONT.)

No	Time Date	Lat. Long.	Type	Ini- tial Range	Est. Speed rse	Cou-tact cd	How Con- Remarks
51	0525 8/19	06-29.0S 122-27.0E	Sail	1,300	--	--	SD Avoided
52	0934 8/19	06-51.7S 123-16.2E	Sail	16,000	--	--	SD Avoided
53	0244 8/20	09-04.9S 123-12.2E	Sail	9,000	--	--	R Avoided
54	0412 8/20	09-04.9S 123-12.2E	Sail	1,650	--	--	R Avoided
55	0423 8/20	09-05.0S 123-11.5E	Sail	1,650	--	--	R Avoided

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AIRCRAFT CONTACTS

CONTACT NUMBER	1	2	3	4
Date	7/4/44	7/6/44	7/10/44	7/10/44
S Time (Zone) -8	1517	0622	0931	1321
U Position: Lat.	28-54.3 S	21-42 S	06-39.2 S	06-10.3 S.
B Long.	112-57.8 E	114-16 E	116-34.2 E	116-48 E.
M Speed	16 Knots	16 Knots	13 Knots	16 Knots
A Base 000T		Base 090T	Base 024T	
R Course	C.H. 40°	C.H. 60°	C.H. 60°	355 T
I Trim	Surf.L.T.	Surf.L.T.	Surf.L.T.	Surf.L.T.
N Minutes Since Last				
E SD Radar Search	0	0	1 Min.	1 Min.
Number	1	1	1	1
A Type	PBY	OS2-4	Unk.	Land Bomber
I Probable Mission	Patrol	Patrol	Patrol	Patrol
R How Contacted	SD	SD	SD	Per.
C Initial Range	12 Miles	7 Miles	6 Miles	10 Miles
F Elevation Angle	2°	2°	Unk.	1°
T				
S/M Range & Relative Bearing of Plane When it Detected				
UNK.	UNK.	UNK.	UNK.	
C Sea: (State (Beau-fort)	3	4	1	1
O Direction (Rel)	045	045	045	045
N				
D Visibility (Miles)	7	9	12	12
I Height in				
T Clouds: (Ft.)	5000	10,000	25,000	--
I Percent				
O Overcast	8	4	3	--
N Bearing (Rel)	--	--	--	--
S Moon: (Angle)	--	--	--	--
I Percent				
O Illum.	--	--	--	--
N				

Type of S/M Camouflage on this Patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	5	6	7	8
Date	7/12/44	7/12/44	7/12/44	7/16/44
Time (Zone) -8	0627	0740	0959	0738
Position: Lat.	01-29 N	01-31 N	01-33 N.	12-24.8 S.
Long.	119-31.2 E	119-27.9 E	119-27 E.	119-22 E.
Speed	16 Knots	15.5 Knots	2.2 Knots.	17 Knots.
Base	000T			
Course	C.H. 60°		000 T	270T
Trim	Surf.L.T.	Surf.L.T.	Per.	Surf.L.T.
Minutes Since Last			1 Hour	
SD Radar Search	1 Min.	0	15 Min.	1 Min.
Number	1	2	1	1
Type	Pete	Float	Rufe	Unk.
Probable Mission	Patrol	Patrol	Patrol	Patrol
How Contacted	Lookout	Lookout	Per.	SD
Initial Range	Est.	11 Mi.	10 Mi.	24 Mi.
Elevation Angle	3°	Unk.	3°	Unk.
Range & Relative Bearing of Plane When it Detected			10 Mi.	
S/M	UNK.	UNK.	351°	UNK.
Sea: (State (Beaufort)	0	0	0	S. & S.E.
Direction (Rel)	0	0	0	2
Visibility (Miles)	12	12	12	10
Clouds: (Ft.)	10,000	10,000	10,000	10,000
(Percent)				
Overcast	9	8	8	9
Bearing (Rel)	--	--	--	--
Moon: (Angle)	--	--	--	--
(Percent)				
Illum.	--	--	--	--

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	9	10	11	12
Date	7/17/44	7/30/44	7/24/44	7/24/44
Time (Zone)	-8	1232	1426	0602
Position: Lat.	11-51 N.	13-44 N.	01-50.4N	01-40.5N.
Long.	117-30 E.	119-52 E	125-42.5E	125-48.4E.
Speed	5.5 Knots	10.6 Knots	14 Kts.	19 Kts.
Course	Base 315 T C.H. 60	150 T	166T	166T
Trim	Surf.L.T.	Surface	Surf.L.T.	Surf.L.T.
Minutes Since Last SD Radar Search	1 Min.	3	1 Min.	1 Min.
Number	1	3	1	1
Type	Unk.	Unk.	Jnk.	Unk.
Precable Mission	Patrol	--	Patrol	Patrol
How Contacted	SD	SD	SD	SD
Initial Range	24 Mi.	23 Mi.	14 Mi.	12 Mi.
Elevation Angle	Unk.	Not Seen.	Not Seen	Not Seen
Range & Relative Bearing of Plane When It Detected		Not Detect-ed.		
S/M	UNK.	UNK.	UNK.	UNK.
Sea: (State (Beaufort) (Direction (Rel)) SW #6 #1 #1				
Visibility (Miles)	15	7-8	5	5
Clouds: (Height in Ft. (Percent Overcast)	10,000	3,000	8,000	8,000
Moon: (Angle (Bearing (Rel))	--	Not Visible	--	--
Illum.	--	--	--	--

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	13	14	15	16
Date	7/25/44	7/26/44	7/26/44	7/26/44
S. Time (Zone)	-8	1358	0605	0742
U. Position: Lat.	01-41 N	02-48 S	02-52S	02-50.2 S
B. Long:	126-32.3E	126-00 E	125-55E	125-29.3 E.
M. Speed	2 Knots	16.9 Kts.	16 Knots	15.8 Knots.
A. Course	150 T	C.H.60°	C.H.60°	C.H. 60°
R. Trim	Per.	Surf.L.T.	Surf.L.T.	Surf.L.T.
I. Minutes Since Last Radar Search	Not Manned	1 Min.	0	1 Min.
N. Number	1	1	1	1
E. Type	Pete	Not Flt. Typ.	Unk.	Unk.
I. Probable Mission	Convoy Escort	Patrol	Patrol	Patrol
R. How Contacted	Per.	Lookout	SD	SD
C. Initial Range	9 Mi.	10-12 Mi.	12 Mi.	16 Mi.
R. Elevation Angle	2°	2°	Unk.	Unk.
A. Range & Relative Bearing of Plane When It Detected	Not Detect-			
F. S/M	ed.	UNK.	UNK.	UNK.
T. C. Sea: (State (Beaufort)	2	1	1	2
O. (Direction (Rel))	185°	190°	190°T	180°T
N. D. Visibility (Miles)	20	7	7	7
I. (Height in Ft.)				
T. I. Clouds: (Percent)	12,000	10,000	10,000	7,000
O. N. Overcast (Bearing (Rel))	2	10	10	4
S. Moon: (Angle Percent Illum.)	Not Visible	--	--	--
	--	--	--	--

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	17	18	19	20
Date	7/26/44	7/26/44	7/26/44	7/27/44
S Time (Zone) -8	1030	1335	1335	1207
U Position: Lat.	02-50.4S	03-10.1S	03-10.1 S	06-58 S.
B M A R I N E	Long.	125-23.3E	125-23.2E	125-23.2 E. 126-18.2E
Speed	15.8 Knots 270T	13.5 Knots	13.5 Knots	13 Knots
Course	C.H. 60°	180T	180T	097T
Trim	Surf.L.T.	Surf.L.T.	Surf.L.T.	Surf.L.T.
Minutes Since Last SD Radar Search	1 Min.	0	1 Min.	1 Min.
Number	1	1	1	1
A Type	Unk.	Unk.	Unk.	Unk.
I Probable Mission	Patrol	Patrol	Patrol	Patrol
R How Contacted	SD	SD	SD	SD
C Initial Range	17 Mi.	16 Mi.	10 Mi.	11 Mi.
R When It Detected	UNK.	UNK.	UNK.	UNK.
E Elevation Angle	Unk.	Unk.	Unk.	Unk.
S Range & Relative Bearing of Plane				
M When It Detected				
T S/M	UNK.	UNK.	UNK.	UNK.
C Sea: (State (Beaufort))	2	2	2	2
O (Direction (Rel))	180°T	180T	180T	ESE
N Visibility (Miles)	7	7	7	10
I (Height in Ft.)	7,000	7,000	7,000	8,000
T Clouds: (Percent)				
I Overcast	4	4	4	7
O (Bearing (Rel))	--	--	--	--
S Moon: (Angle Percent)	--	--	--	--
M Illum.	--	--	--	--

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER 21 22 23 24

Date	7/28/44	7/28/44	7/28/44	8/1/44
S. Time (Zone) -8	0724	1227	1648	1644
U. Position: Lat.	09-38 S.	10-20.8S.	10-51S	9-21.8S
M. Long.	128-10.4E	128-35.1E	128-48.9E	127-56.6E
R. Speed	13.8 Knots	13.5 Kts.	13.5 Kts.	13.4 Kts.
N. Base	154T	154T	154T	154T
E. Course	C.H. 60°	C.H. 60°	C.H. 60°	334T
Trim	Surf. L.T.	Surf.L.T.	Surf.L.T.	Surf.L.T.
Minutes Since Last				
SD Radar Search	1 Min.	1 Min.	1	1 Min.

Number	1	2	1	1
A. Type	Unk.	Unk.	Float BiPlane	Land Type
I. Probable Mission	Patrol	Patrol	Patrol	Unk.
C. R. How Contacted	SD	SD	Lookout	Sighted
A. E. Initial Range	20 Mi.	19 Mi.	10-12 Mi.	10 Mi.
T. Elevation Angle	Unk.	Unk.	3°	2°
Range & Relative Bearing of Plane When It Detected			Believed Not	Believed Not
S/M	UNK.	UNK.	Detected	Detected

C. Sea: (fort)	1	2	1	1
O. (Direction Rel)	SE	SE	SE	SE
D. Visibility (Miles)	8	8	16	15
I. (Height in Ft.)	4,000	8,000	30,000	10,000
T. Clouds: (Percent)	9	6	1	5
O. Overcast	--	--	--	--
N. (Bearing Rel)	--	--	--	--
S. Moon: (Angle Percent Illum.)	--	--	--	--

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/35S-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	25	26	27	28
Date	8/2/44	8/2/44	8/2/44	8/2/44
S. Time (Zone) -8	0713	1129	1445	1601
U. Position: Lat.	05-50 S	04-49.4 S.	03-56 S.	03-57 S.
B. Long.	126-04 E	125-54 E.	125-40 E	125-40 E.
M. Speed	17 Knots	17 Knots	17 Knots	17 Knots
R. Course	330T	354T	354 T	354T
I. Trim	Surf.L.T.	Surf.L.T.	Surf.Hy.	Surf.L.T.
N. Minutes Since Last SD Radar Search	2 Min.	1 Min.	2 Min.	2 Min.
E. Number	1	1	1	1
A. Type	Unk.	Unk.	Unk.	Unk.
I. Probable Mission	Patrol	Patrol	Unk.	Unk.
R. How Contacted	SD	SD	SD	SD
C. Initial Range	11 Mi.	24 Mi.	17 Mi.	12 Mi.
R. Elevation Angle	Unk.	Unk.	Unk.	Unk.
A. Range & Relative Bearing of Plane When It Detected			Not Believed	
F. S/M	UNK.	UNK.	Detected	UNK.
C. Sea: (State (Beaufort))				
O. (Direction (Rel))	2	2	2	2
N. (Direction (Rel))	E.	SxE	100	105
D. Visibility (Miles)	15	10	15	15
I. (Height in Ft.)			8,000	8,000
T. Clouds: (Percent Overcast)	3,000	5,000	19,000	19,000
I. (Bearing (Rel))	--	--	--	--
O. Moon: (Angle Illum.)	--	--	--	--

Type of S/N Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	29	30	31	32	
Date	8/2/44	8/3/44	8/3/44	8/3/44	
S U B M A R T N E	Zone (Zone) 8 Position: Lat. Long. Speed Course	0545 01-50.5S 126-34.3E s/s on 4 S.H.001	1247 02-45 S 126-36.7E 2 Kts. 150T	1524 02-03.5S 126-33 E 2.1 Kts. 180T	1624 02-05.2S 126-31 E 13.5 Kts. 228 T
T M S R O F T	Time Minutes Since Last SD Radar Search Surf. L.T. Not in Operation Per.	Surf. Hy. Not in Operation Per.	Per. Not in Operation Per.	Per. Operation 1 Min. Surf. Hy.	
A I R C R A F T	Number Type Probable Mission How Contacted Initial Range Elevation Angle Range & Relative Bearing of Plane When It Detected S/M	Unk. Unk. H By Bluefish Unk. Unk.	1 Pete Escort Per. 14,000 Yds. 2.5° A Unk.	1 Lily Patrol Per. 6 Mi. 6° Not Believed Detected 1° Unk.	
C O N D I T O N S	(State (Beaufort) (Direction (Rel)) Visibility (Miles) (Height in Clouds: (Ft.) (Percent Overcast (Bearing (Rel)) Moon: (Angle (Percent Illum.)	2 175 8 1,000 4,000 10 -- -- -- --	2 180 8 4,000 12,000 7 -- -- --	2 320 10 11,000 9 -- -- -- --	

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	33	34	35	36
Date	8/3/44	8/4/44	8/4/44	8/4/44
S Time (Zone)	-8 1626	0701	0917	0947
U Position: Lat.	02-03 S.	02-03.7 S	01-59 S	02-00.6 S
B				
M Long.	126-31 E.	125-34.6 E.	125-32.3 E	125-29.5 E
A				
R Speed	13.5 Kts.	2 Kts.	2 Kts.	2 Kts.
I				
N Course	228 T	180T	270 T	270 T
E Trim	Surf. Hy.	Per.	Per.	Per.
Minutes Since Last SD Radar Search	Nct	Not	Not	Not
Operating	Operating	Operating	Operating	Operating
Number	1	1	1	1
A Type	Unk.	Rufe	Float BiPlane	Float BiPlane
I				
R Probable Mission	Patrol	Patrol	Patrol	Patrol
C				
R How Contacted	SD	Per.	Per.	Per.
A				
F Initial Range	11 Mi.	10 Mi.	6 Mi.	8 Mi.
T Elevation Angle	Unk.	1°	1°	1°
Range & Relative Bearing of Plane When It Detected	•	Believed	Not	Not
S/M	UNK.	Detected	Detected	Detected
C Sea: (State (Beaufort))	2	1	1	1
O Direction (Rel)	310	135	130	130
N				
D Visibility (Miles)	9	6	4	8
I				
T Clouds: (Height in Ft.)	11,000	4,000	3,000	3,000
I				
O Percent Overcast	9	10	9	9
N Bearing (Rel)	--	--	--	--
S Moon: (Angle Illum.)	--	--	--	--

Type S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

<u>CONTACT NUMBER</u>	<u>37</u>	<u>38</u>	<u>39</u>	<u>40</u>
<u>Date</u>	<u>8/4/44</u>	<u>8/5/44</u>	<u>8/5/44</u>	<u>8/5/44</u>
<u>S U B M A R I N E</u>	<u>Time (Zone) -8</u>	<u>1208</u>	<u>0540</u>	<u>0858</u>
	<u>Position: Lat.</u>	<u>02-03.4S</u>	<u>02-16.2S</u>	<u>02-39S</u>
	<u>Long.</u>	<u>125-27.3E</u>	<u>123-42.6E</u>	<u>123-08E</u>
	<u>123-07.8E.</u>			
<u>I N E</u>	<u>Speed</u>	<u>2 Knots</u>	<u>17 Knots</u>	<u>16 Knots</u>
	<u>Course</u>	<u>270T</u>	<u>237T</u>	<u>237T</u>
		<u>60Ft.</u>		
<u>A I R C R A F T</u>	<u>Trim</u>	<u>Sub.</u>	<u>Surf.L.T.</u>	<u>Surf.L.T.</u>
	<u>Minutes Since Last SD Radar Search</u>	<u>Not Operating</u>	<u>Not Operating</u>	<u>0</u>
				<u>0</u>
	<u>Number</u>	<u>1</u>	<u>1</u>	<u>1</u>
<u>C O N D I T I O N S</u>	<u>Type</u>	<u>Mavis</u>	<u>Unk.</u>	<u>Unk.</u>
	<u>Probable Mission</u>	<u>Patrol</u>	<u>Patrol</u>	<u>Patrol</u>
	<u>How Contacted</u>	<u>Per.</u>	<u>Lookout</u>	<u>SD</u>
	<u>Initial Range</u>	<u>7 Mi.</u>	<u>15 Mi.</u>	<u>30 Mi.</u>
	<u>Elevation Angle</u>	<u>2° - 3°</u>	<u>1°</u>	<u>Unk.</u>
	<u>Range & Relative Bearing of Plane</u>			<u>Unk.</u>
	<u>When It Detected S/M</u>	<u>Not Detected</u>	<u>Not Detected</u>	<u>Not Detected</u>
				<u>UNK.</u>
<u>C O N D I T I O N S</u>	<u>(State Sea: (Beaufort)</u>	<u>1</u>	<u>2</u>	<u>2</u>
	<u>(Direction (Rel))</u>	<u>130</u>	<u>165</u>	<u>165</u>
	<u>Visibility (Miles)</u>	<u>5</u>	<u>15</u>	<u>10</u>
	<u>(Height in Clouds: (Ft.)</u>	<u>3,000</u>	<u>10,000</u>	<u>3,000</u>
	<u>(Percent Overcast)</u>	<u>9</u>	<u>10</u>	<u>10</u>
	<u>(Bearing (Rel))</u>	<u>--</u>	<u>--</u>	<u>--</u>
	<u>Moon: (Angle</u>	<u>--</u>	<u>--</u>	<u>--</u>
	<u>(Percent Illum.)</u>	<u>--</u>	<u>--</u>	<u>--</u>

Type S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	41	42	43	44
Date	8/9/44	8/9/44	8/9/44	8/10/44
S Time (Zone)	0858	1500	1545	0942
J Position: Lat.	04-09.8S	04-11.5S.	04-50.4S.	05-25.3S.
M Long.	124-41.9E	124-08.7E	124-05.2E	121-09.9E.
R Speed	10 Knots	10 Knots	13 Knots	15.8 Knots
I Base 225T				
N Course	000T	C.H. 60°	225T	080T
E Trim	Surf.L.T.	Surf.L.T.	Surf.L.T.	Surf.L.T.
Minutes Since Last				
SD Radar Search	2 Min.	2 Min.	2 Min.	2 Min.
Number	1	1	1	1
A Type	Unk.	Unk.	Unk.	Unk.
I Probable Mission	Patrol	Patrol	Unk.	Patrol
R HCW Contacted	SD	SD	SD	SD
A Initial Range	7 Mi.	22 Mi.	16 Mi.	20 Mi.
F Elevation Angle	Unk.	Unk.	Unk.	Unk.
T Range & Relative				
Bearing of Plane				
When It Detected				
S/M	UNK.	UNK.	UNK.	UNK.
C Sea: (State(Beau- fort))	1	1	2	1
O (Direction(Rel))	135	145	145	090
N Visibility (Miles)	8 Mi.	12 Mi.	14 Mi.	17 Mi.
D (Height in Clouds: (Ft.)	4,000	5,000	6,000	7,000
I (Percent Overcast)	80	7	7	7
O (Bearing(Rel))	--	--	--	--
N Moon: (Angle Percent Illum.)	--	--	--	--

Type S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

CONTACT NUMBER	45	46	47	48
Date	8/10/44	8/12/44	8/12/44	8/15/44
S Time (Zone)	1159	0554	0809	0720
B Position: Lat.	05-14.5S.	05-24.9S	05-21.4S	02-26.8S.
M Long.	121-22.5E	121-03.9E	121-02.8E	126-45.4E
R Speed	13.5 Knots	14 Knots	14 Knots	13.6 Knots
N		333T	333T	240T
E Course	270 T	C.H. 60°	C.H. 60°	C.H. 60°
T Wind	Surf, L.T.	Surf.L.T.	Surf.L.T.	Surf.L.T.
I Minutes Since Last		Not		
R Radar Search	1 Min.	Operating	0	0
A Number	1	1	1	1
I Type	Unk.	Unk.	Unk.	Unk.
R Probable Mission	Patrol	Patrol	Patrol	Patrol
A How Contacted	SD	Lookout	SD	SD
F Initial Range	20 Mi.	8 Mi.	8 Mi.	7 Mi.
T Elevation Angle	Unk.	4°	Unk.	Unk.
R Range & Relative				
B Bearing of Plane				
W When it Detected				
S/M UNK.	UNK.	UNK.	UNK.	UNK.
C Sea: (State (Beau- fort))	1	2	2	2
O (Direction (Rel))	090	090	090	180
D Visibility (Miles)	17	8 Mi.	12 Mi.	12 Mi.
I Height in T Clouds: (Ft.)	7,000	2,000	12,000	3,000
I Percent				
O Overcast	3	1	1	2
N Bearing (Rel)	--	--	--	--
S Moon: (Angle Percent Full)	--	--	--	--

Type S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

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AIRCRAFT CONTACTS

<u>CONTACT NUMBER</u>	<u>49</u>	<u>50</u>	<u>51</u>	<u>52</u>	
<u>Date</u>	<u>8/15/44</u>	<u>8/15/44</u>	<u>8/16/44</u>	<u>8/16/44</u>	
S U B M A R I N E	<u>Time (Zone) -8</u> <u>Position:</u> Lat. <u>Long.</u>	<u>1222</u> <u>03-23.5S.</u> <u>126-45.5E.</u>	<u>1414</u> <u>02-23.5S.</u> <u>126-42.5E.</u>	<u>1019</u> <u>05-38.5S.</u> <u>125-11.8E.</u>	<u>1145</u> <u>05-43 S.</u> <u>125-12.9E.</u>
<u>Speed</u>	<u>13.5 Knots.</u>	<u>13.5 Knots.</u>	<u>16 Kts.</u>	<u>15.5 Kts.</u>	
	<u>240T</u>	<u>060T</u>		<u>160T</u>	
<u>Course</u>	<u>C.H. 60°</u>	<u>C.H. 60°</u>	<u>180T</u>	<u>C.H. 60°</u>	
<u>Trim</u>	<u>Surf.L.T.</u>	<u>Surf.L.T.</u>	<u>Surf.L.T.</u>	<u>Surf.L.T.</u>	
<u>Minutes Since Last SD Radar Search</u>	<u>1 Min.</u>	<u>1 Min.</u>	<u>1 Min.</u>	<u>1 Mih.</u>	
<u>Number</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	
A I R C R A F T	<u>Type</u> <u>Probable Mission</u> <u>How Contacted</u> <u>Initial Range</u> <u>Elevation Angle</u>	<u>Unk.</u> <u>Patrol</u> <u>SD</u> <u>4 Mi.</u> <u>Unk.</u>	<u>Unk.</u> <u>Patrol</u> <u>SD</u> <u>7 Mi.</u> <u>Unk.</u>	<u>Unk.</u> <u>Patrol</u> <u>SD</u> <u>10 Mi.</u> <u>Unk.</u>	<u>Emily</u> <u>High</u> <u>Per.</u> <u>8 Mi.</u> <u>1</u>
S/M	<u>Range & Relative Bearing of Plane When It Detected</u>	<u>UNK.</u>	<u>UNK.</u>	<u>UNK.</u>	<u>Not Detected</u>
C O N D I T I O N S	<u>(State (Beaufort))</u> <u>(Direction (Rel))</u> <u>Visibility (Miles)</u> <u>(Height in Clouds)</u> <u>(Percent Overcast)</u> <u>(Bearing (Rel))</u> <u>Moon: (Angle)</u> <u>(Percent Illum.)</u>	<u>2</u> <u>140</u> <u>12</u> <u>Ft.</u> <u>5,000</u> <u>3</u> <u>--</u> <u>--</u> <u>--</u>	<u>2</u> <u>138</u> <u>15</u> <u>7,000</u> <u>3</u> <u>--</u> <u>--</u> <u>--</u>	<u>2</u> <u>135</u> <u>15</u> <u>5,000</u> <u>4</u> <u>--</u> <u>--</u> <u>--</u>	<u>2</u> <u>135</u> <u>12</u> <u>5,000</u> <u>4</u> <u>--</u> <u>--</u> <u>--</u>

Type S/N: Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

CONFIDENTIAL

AIRCRAFT CONTACTS

<u>CONTACT NUMBER</u>	<u>53</u>	<u>54</u>
<u>Date</u>	<u>8/19/44</u>	<u>8/20/44</u>
S : <u>Time (Zone)</u>	<u>-8</u> <u>1600</u>	<u>1651</u>
U : <u>Position:</u>	<u>Lat.</u> <u>07-27.4S.</u>	<u>11-52.1S.</u>
B : <u>Long.</u>	<u>124-45 E.</u>	<u>121-39 E.</u>
M : <u>Speed</u>	<u>15.3 Knots.</u>	<u>15.3 Knots.</u>
A : <u>Course</u>	<u>140 T C.H. 60°</u>	<u>205 T C.H. 60°</u>
R : <u>Trim</u>	<u>Surf. L.T.</u>	<u>Surf. L.T.</u>
I : <u>Minutes Since Last</u>		
N : <u>SD Radar Search</u>	<u>1 Min.</u>	<u>1 Min.</u>
<hr/>		
<u>Number</u>	<u>1</u>	<u>1</u>
A : <u>Type</u>	<u>Unk.</u>	<u>Monoplane Low Wing</u>
I : <u>Probable Mission</u>	<u>Unk.</u>	<u>Unk.</u>
R : <u>How Contacted</u>	<u>SD</u>	<u>Visual</u>
C : <u>Initial Range</u>	<u>10 Mi.</u>	<u>5 Mi.</u>
R : <u>Elevation Angle</u>	<u>Unk.</u>	<u>4°</u>
A : <u>Range & Relative</u>		
I : <u>Bearing of Plane</u>		
O : <u>When It Detected</u>		
N : <u>S/M</u>	<u>UNK.</u>	<u>UNK.</u>
<hr/>		
C : <u>Sea:</u>	<u>{ State(Beau- fort) 1</u>	<u>1</u>
O : <u>{ Direction(Rel) 350</u>		<u>005</u>
N : <u>Visibility (Miles)</u>	<u>16</u>	<u>15</u>
D : <u>(Height in</u>		
I : <u>Clouds:(</u>	<u>Ft. 1200</u>	<u>1200</u>
T : <u>(Percent</u>		
I : <u>Overcast 2</u>		<u>2</u>
O : <u>(Bearing(Rel)</u>	<u>--</u>	<u>--</u>
N : <u>Moon:(Angle</u>	<u>--</u>	<u>--</u>
S : <u>(Percent</u>		
M : <u>Illum. --</u>		<u>--</u>
<hr/>		

Type of S/M Camouflage on this patrol - Mod. Haze Gray 32/3SS-B

CONFIDENTIAL

(H) ATTACK DATA

U.S.S. CCD (SS224) TORPEDO ATTACK NO. 1A PATROL NO. 4

Time 0910 H Date 16 July 1944 Lat. 12-25.2 N.
Long. 119-19.8E.

Target Data - Damage Inflicted

Description:

The convoy consisted of two small AKs and one escort maru of about 2000(T). Similar to KEIZAN MARU, p. 143 of ONI 208-J Revised, except that funnels were about 10' higher than shown.

Ships Sunk: None

Ships Damaged
or Probably Sunk: None

Target Draft 10' Course 250 T Speed 8 Average Torp.
Run-#3,4,5 - 1500
#6,1,2 - 2100.

Own Ship Data

Speed 3 Course 134 T Depth 61' Angle 0

Fire Control and Torpedo Data

Submerged periscope using plot and TDC.

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6	No. 1	No. 2
Track Angle	96½ S	95 3/4S	99S	87½S	92½S	93½S
Gyro Angle	34½	32 3/4	35	23½	28½	29½
Depth Set	6'	6'	6'	6'	6'	6'
Power	High	High	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Miss	Miss	Miss
Erratic	No	No	No	No	No	No
Mark Torpedo	14-3A	14-3A	14-3A	23	23	14-3A
Serial No.	40506	40093	25948	52774	53162	40762
Mark Exploder	6-5	6-5	6-5	6-5	6-5	6-5
Serial No.	24982	17110	24988	17096	17143	17124
Actuation Set.	Contact	Contact	Contact	Contact	Contact	Contact
Mark Warhead	16-1	16-1	16-1	16-1	16	16-1
Serial No.	13739	13687	12635	11638	3012	13705
Explosive	TPX	TPX	TPX	TPX	TPX	TPX
Firing Interval	0	7	6	8	13	13
Type Spread	0	1½	1½	0	1	1
Sea Conditions	0 - Flat Calm					
Overhaul Activity	U.S.S. ORION					

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 1B PATROL NO. 4

Time 0912 H Date 16 July 1944 Lat. 12-25.2N.
Long. 119-19.8E.

Target Data - Damage Inflicted

Description:

Same as for attack #1A with target being the escort maru.

Ships Sunk: None

Ships Damaged
or Probably Sunk: None

Target Draft 10' Course 050 T Speed 10 Average Torp.
Run - 1600.

Own Ship Data

Speed 3 Course 134 T Depth 61' Angle 0

Fire Control and Torpedo Data

Type Attack:

Submerged periscope swinging for stern tube
shot at escort who had turned toward after attack
#1A.

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

Tubes Fired	No. 7	No. 8	No. 9	No. 10
Track Angles	3 S	5 S	8½ S	11 S
Gyro Angles	107	111	116½	122
Depth Set	6'	6'	6'	6'
Power	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Miss
Erratic	No	No	No	No
Mk. Torpedo	23	23	23	23
Serial No.	33824	26899	49730	53204
Mk. Exploder	6-5	6-5	6-5	6-5
Serial No.	17101	17146	25021	24998
Actuation Set	Contact	Contact	Contact	Contact
Mk. Warhead	16-1	16-1	16-1	16-1
Serial No.	13699	13597	12636	13736
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	5	7	7
Type Spread	½	½	1½	1½
Sea Conditions	0 - Flt Calm			
Overhaul Activity	U.S.S. ORION			

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 2 PATROL NO. 4

Time 0015 H Date 17 July 1944 Lat. 10-59 N.
Long. 118-17 E.

Target Data - Damage Inflicted

Description:

Same as Attack No. 1

Ships Sunk: None

Ships Damaged
or Probably Sunk: None

Damage Determined by: No Hits Observed.

Target Draft 10' Course 195 T Speed 8 Average Torp.
Run - 1500 to
1550 yards.

Own Ship Data

Speed 8.5 Course 294 $\frac{1}{2}$ T

Fire Control and Torpedo Data

Night surface radar attack on same convoy as
for attack #1. Radar ranges and T.B.T. bearings.

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5
Track Angles	82 $\frac{1}{2}$ P	82 3/4 P	84 3/4 P
Gyro Angles	358	358 $\frac{1}{2}$	355 3/4
Depth Set	3'	3'	3'
Power	High	High	High
Hit or Miss	Miss	Miss	Miss
Erratic	Yes - Deep	Yes - Deep	No
Mark Torpedo	23	23	23
Serial No.	41675	49317	49403
Mark Exploder	6-5	6-5	6-5
Serial No.	25140	14439	14435
Actuation Set	Contact	Contact	Contact
Mark Warhead	16-1	16-1	16-1
Serial No.	13154	13581	13217
Explosive	TPX	TPX	TPX
Firing Interval	0	3	8
Type Spread	0	1 1/3 R	1 1/3 L
Sea Conditions	0 - Flat Calm		
Overhaul Activity	U.S.S. ORION		

CONFIDENTIAL

(H). ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 3 PATROL NO. 4

Time 2240 H Date 17 July 1944 Lat. 12-24 N.
Long. 116-32 E.

Target Data - Damage Inflicted

Description:

The target group consisted of seven ships, two very large units and five smaller ships which were presumed to be escorts from their distribution. The near escort appeared to be a large destroyer and the relative ranges from radar and size of pips indicate that all the escorts were destroyers. Radar tracked escorts with ease at 20,000 yards while the large units could be tracked in excess of 24,000 yards.

Ships Sunk: None

Ships Damaged
or Probably Sunk: One

Damage Determined by: Heard one timed hit for range which checked for trailing escort.

Target Draft 9' Course 270T Speed 19 Average
Torp. Run
2000-1700.

Own Ship Data

Speed 3 Course 148-135 T Depth 40' Angle 0

Fire Control and Torpedo Data

Type Attack: Night radar submerged using radar ranges and bearings.

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6	No. 1	No. 2
Track Angles	22	21	19 $\frac{1}{2}$	17.4	18	15
Gyro Angles	324	324	325	325.4	329	330
Depth Set	3'	3'	3'	3'	3'	3'
Power	High	High	High	High	High	High
Hit or Miss	Possible Miss Hit		Miss	Miss	Miss	Miss
Erratic	No	No	No	No	No	No
Mark Torpedo	Mk 23	Mk 23	Mk 23	Mk 23	Mk 23	Mk 23
Serial No.	41322	53075	53137	49718	49729	49369
Mark Exploder	6-5	6-5	6-5	6-5	6-5	6-5
Serial No.	17115	17152	17102	14277	24992	24999
Actuation Set	Contact	Contact	Contact	Contact	Contact	Contact
Mark Warhead	15	15	15	16-1	16-1	16-1
Serial No.	3727	1501	2157	13197	13741	13177
Explosive	TNT	TNT	TNT	TPX	TPX	TPX
Firing Interval	0	5	7 $\frac{1}{2}$	6 $\frac{1}{2}$	7 $\frac{1}{2}$	5
Type Spread	0	$\frac{1}{2}$ L	$\frac{1}{2}$ R	1 L	1 R	1 $\frac{1}{2}$ L
Sea Conditions	0 - Slight swell from west.					
Overhaul Activity	U.S.S. ORION.					

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 4 PATROL NO. 4

Time 0445 H Date 20 July 1944 Lat. 14-23.2 N.
Long. 119-41.5 E.

Target Data - Damage Inflicted

Description:

The convoy was contacted on radar at 21,000 yards and tracked to firing point by radar only. Visibility was less than 1000 yards due to heavy rain and dark overhanging clouds. Target was sighted intermittently in lightning flashes. From these brief glimpses and radar contact range target was determined to be an AK of about 5000 tons.

Ships Sunk: None

Ships Damaged or
Probably Sunk: None

Damage Determined by: No Hits Observed.

Target Draft 20' Course 105 T Speed 9 Average Torp.
Run 1350-1400.

Own Ship Data

Speed 8 Course 145 $\frac{1}{2}$ - 148 T.

Fire Control and Torpedo Data

Type Attack: Night radar surface using radar ranges and bearings.

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

Tubes Fired	No. 7	No. 8	No. 9	No. 10
Track Angles	49.9	53.5	53	58
Gyro Angles	189 $\frac{1}{2}$	192	190	195
Depth Set	3'	3'	3'	3'
Power	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Miss
Erratic	No	No	No	No
Mk. Torpedo	23	23	23	23
Serial No.	59407	49751	46140	49506
Mk. Exploder	6-5	6-5	6-5	6-5
Serial No.	25146	25134	17143	24975
Actuation Set	Contact	Contact	Contact	Contact
Mk. Warhead	16-1	16-1	16-1	16-1
Serial No.	13723	13747	13682	13715
Explosive	TPX	TPX	TPX	TPX
Firing Interval	8 seconds			
Type Spread	1 $\frac{1}{4}$ L	1 $\frac{1}{4}$ R	2 $\frac{1}{2}$ L	2 $\frac{1}{2}$ R
Sea Conditions	Swell and White Caps - Force 4.			
Overhaul Activity	U.S.S. CFIION.			

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 5 P TROL NO. 4

Time 2155 H Date 25 July 1944 Lat. 01-46.5 S.
Long. 125-33 E.

Target Data - Damage Inflicted

Description:

MFM AK, raised 1, 2, & 3 islands, composite superstructure, counter stern, high funnel. Guns fore and aft. Similar to MREI MARU on p. 128 of ONI 208-J Revised.

Ship Sunk:

Ship Damaged or
Probably Sunk: One

Damaged Determined by:

Heard and timed one hit on target. Later tracking of target gave speed of $\frac{1}{2}$ knot. Target turned on red mast-head light and flashed it vigorously. Radar pip diminished in size. Escort commenced firing a light. Observed flashes from target.

Target Draft 18' Course 295 T Speed 7 3/4 Average
Torp. Run
3800.

Own Ship Data

Speed 11.6 Course 249 $\frac{1}{2}$ T.

Fire Control and Torpedo Data

Type Attack: Night radar surface using TBT bearings and radar ranges.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3
Track Angle	134 $\frac{1}{2}$
Gyro Angle	001 3/4
Depth Set	3'
Power	High
Hir or Miss	Hit
Erratic	No
Mk Torpedo	23
Serial No.	53206
Mk. Exploder	6-5
Serial No.	17113
Actuation Set	Contact
Actuation Actual	Contact
Mk. Warhead	15
Serial No.	2131
Explosive	TNT-TPX Extendor
Firing Interval	0
Type Spread	0
Sea Conditions	0 - Flt Calm.
Overhaul Activity	U.S.S. ORION

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 6 PATROL NO. 4

Time 0225 Date 3 August 1944 Lat. 01-45 S.
Long. 126-14 E.

Target Data - Damage Inflicted

Description:

Ship was a raised 1, 2, 3, MFM type with fairly heavy block superstructure, raked bow, short and fairly broad stack, heavy masts, similar to PALAU MARU p. 40, ONI 208-J, Revised, but with higher 1 & 3 islands; also similar to SINSEI MARU (p.101) but without goalposts and with higher 1 and 3 islands.

Ship Sunk: One

Damage Determined by:

Observed two hits and heard three hits on target. Screws stopped and heavy breaking up noise was heard for three minutes after target was hit. Upon surfacing on the scene much debris and heavy oil slick was noted. Ten to fifteen survivors were seen near a small life boat.

Target Draft 20' Course 120 T Speed 9 Average Torp.
Run - 500 Yds.

Own Ship Data

Speed 2.5 Course 195 T Depth 64' Angle 6

Fire Control and Torpedo Data

Type Attack: Night radar submerged using periscope bearings.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 7	No. 8	No. 9	No. 10
Track Angle	57 $\frac{1}{4}$	72 $\frac{1}{4}$	70 $\frac{1}{4}$	71
Gyro Angle	163° 20'	178° 20'	176° 20'	177
Depth Set	2'	2'	2'	2'
Power	High	High	High	High
Hit or Miss	Hit	Hit	Hit	Miss
Erratic	No	No	No	No
Mark Torpedo	23	23	23	23
Serial No.	41401	41182	41279	33857
Mark Exploder	6-4	6-4	6-4	6-4
Serial No.	8773	2955	8580	8305
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	Contact	Contact	Contact	--
Mark Warhead	16-1	16	16	16
Serial No.	13660	8947	5365	3627
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	10	12	13
Type Spread	Divergent - By Periscope			
Sea Conditions	Flat Calm.			
Overhaul Activity	Naval Section Base, Navy #245,			

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(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 7 PATROL NO. 4

Time 1144 H Date 10 August 1944 Lat. 05-14.8 S.
Long. 121-13.5 E.

Target Data - Damage Inflicted

Description:

Small AK or naval auxiliary (EU) 2000 T. MFM
raised 1, 2, & 3 islands, block superstructure.

Ships Sunk: One.

Damaged Determined by:

Observed and heard three hits at which time the target disappeared in a cloud of smoke. Surfaced in midst of large oil slick and much debris. Picked up the lone survivor.

Target Draft 10' Course 072 T Speed $7\frac{1}{2}$ Average
Torpedoes Run 1400.

Own Ship Data

Speed 2.5 Course 340 T Depth 60' Angle 0

Fire Control and Torpedo Data

Type Attack: Submerged periscope using plot and TDC.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	92 $\frac{1}{2}$	95	94 $\frac{1}{2}$	99 $\frac{1}{2}$
Gyro Angle	004 $\frac{1}{2}$	007	006 $\frac{1}{4}$	011
Depth Set	2'	2'	2'	2'
Power	High	High	High	High
Hit or Miss	Hit	Hit	Hit	Miss
Erratic	No	No	No	No
Mark Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	40256	26818	25315	25810
Mark Exploder	6-5	6-5	6-5	6-5
Serial No.	13613	13560	13880	12233
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	Contact	Contact	Contact	Miss
Mark Warhead	16-1	16	16	16-1
Serial No.	9589	10406	2991	11985
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	7 $\frac{1}{2}$	9	7
Type Spread	Divergent - Using Periscope			
Sea Conditions	Calm			
Overhaul Activity	Naval Section Base, Navy #245,			

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK #8A PATROL NO. 4

Time 2252 H Date 10 August 1944 Lat. 05-43.5 S.
Long. 120-45.9 E.

Target Data - Damage Inflicted

Description: Unidentified engines aft ship.

Ships Sunk: None

Ships Damaged or
Probably Sunk: One

Damaged Determined by:

Saw and heard one hit on target. Observed target during subsequent tracking, well down by the bow making very large bow wave.

Target Draft 12' Course 265 T Speed 8.9 Average
Torp. Run 2100

Own Ship Data

Speed 4.7 Course 016 T

Fire Control and Torpedo Data

Type Attack: Night radar surface using TBT bearings and radar ranges.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	67 $\frac{1}{2}$	69 $\frac{1}{4}$	68	70
Gyro Angle	002 $\frac{1}{2}$	000	001	359
Depth Set	2'	2'	2'	2'
Power	High	High	High	High
Hit or Miss	Hit	Miss	Miss	Miss
Erratic	No	No	No	No
Mark Torpedo	14-3A	14-3A	14-3A	14-3A
Serial No.	40345	40431	23373	26235
Mark Exploder	6-4	6-5	6-5	6-5
Serial No.	8180	13441	17312	13572
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	Contact	Miss	Miss	Miss
Mark Warhead	16-1	16-1	16-1	16-1
Serial No.	12561	12945	12946	13099
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	9	7 $\frac{1}{2}$	8
Type Spread	$\frac{1}{2}$	$\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Sea Conditions	Calm			
Overhaul Activity	Naval Section Base, Navy	245		

CONFIDENTIAL

(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 8B PATROL NO. 4

Time 0019 H Date 11 August 1944 L t. 05-37.5 S.
Long. 120-36.6 E.

Target Data - Damage Inflicted

Description:

Same as Attack #8A.

Ships Sunk: One.

Damaged Determined by:

Observed and heard one hit on target amidships.
Screws stopped. Target was observed to sink through
periscope.

Target Draft 12' Course 275 T Speed 8 Average
Torp. Run 1100.

Own Ship Data

Speed 3.5 Course 195 T Depth 60' Angle 0

Fire Control and Torpedo Data

Type Attack: Night radar submerged using only periscope
bearings in final stages of attack.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	94	97 $\frac{1}{2}$	96 3/4	101 $\frac{1}{4}$
Gyro Angle	354	357 $\frac{1}{2}$	357 $\frac{1}{4}$	002 $\frac{1}{4}$
Depth Set	3'	3'	3'	3'
Power	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Hit
Erratic	No	No	No	No
Mk. Torpedo	23	23	14-3A	23
Serial No.	49360	41010	40054	53203
Mark Exploder	6-5	6-5	6-4	6-5
Serial No.	13345	16971	6715	16994
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	Miss	Miss	Miss	Contact
Mark Warhead	16-1	16-1	16-1	16-1
Serial No.	13658	9352	12938	11206
Explosive	TP	TPX	TPX	TPX
Firing Interval	0	10 $\frac{1}{2}$	9	10 $\frac{1}{2}$
Type Spread	Divergent - Periscope.			
Sea Conditions	Calm			
Overhaul Activity	Naval Section Base, Navy #245,			

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(H) ATTACK DATE (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 9 PATROL NO. 4

Time 0155 H Date 14 August 1944 Lat. 04-17 S.
Long. 126-46 E.

Target Data - Damage Inflicted

Description:

Large landing barge - See sketch in narrative.

Ships Sunk: One

Damaged Determined by:

Observed and heard three hits on target. Screws stopped and never started again. Observed target as it sank.

Target Draft 8' Course 090 T Speed 13.1 Average
Torp. Run
1000-1150.

Own Ship Data

Speed 3 Course 310 T Depth 40' Angle 0

Fire Control and Torpedo Data

Type Attack: Night radar submerged. Periscope bearings and radar ranges were introduced up to the time of firing.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 7	No. 9	No. 10	No. 8
Track Angle	120	125 $\frac{1}{2}$	125 $\frac{1}{2}$	136
Gyro Angle	200 $\frac{1}{2}$	195	194 $\frac{1}{2}$	184
Depth Set	2'	2'	2'	2'
Power	High	High	High	High
Hit or Miss	Hit	Hit	Hit	Miss
Erratic	No	No	No	No
Mark Torpedo	23	23	23	23
Serial No.	41268	46146	26852	41225
Mark Exploder	6-4	6-5	6-4	6-5
Serial No.	18004	13452	1557	13549
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	Contact	Contact	Contact	Miss
Mark Warhead	16-1	16-1	16-1	16-1
Serial No.	12117	13101	12127	12761
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	9	8	12
Type Spread	Divergent - Periscope bearings.			
Sea Conditions	Calm			
Overhaul Activity	Naval Section Base, Navy #245,			

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(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) TORPEDO ATTACK NO. 10 PATROL NO. 4

Time 2001 H Date 18 August 1944 Lat. 05-03.8 S.
Long. 121-21.8 E.

Target Data - Damage Inflicted

Description:

Unidentified; smoking heavily.

Ships Sunk: None

Ships Damaged or
Probably Sunk: None

Damaged Determined by: No Hits Observed.

Target Draft ? Course 060 T Speed 8 Average Torp.
Run - 1595.

Own Ship Data

Speed 2 Course 319 T Depth 40' Angle 0

Fire Control and Torpedo Data

Type Attack: Night radar submerged using radar ranges
and periscope bearings.

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(H) ATTACK DATA (CONT.)

Tubes Fired	No. 3	No. 4	No. 5	No. 6
Track Angle	59	57 3/4	61 $\frac{1}{4}$	58 $\frac{1}{4}$
Gyro Angle	339 $\frac{1}{2}$	338 3/4	342 $\frac{1}{4}$	339 $\frac{1}{4}$
Depth Set	2'	2'	2'	2'
Power	High	High	High	High
Hit or Miss	Miss	Miss	Miss	Miss
Erratic	No	No	No	No
Mark Torpedo	14-3A	14-3A	23	23
Serial No.	25327	26075	41211	53235
Mark Exploder	6-5	6-5	6-5	6-5
Serial No.	13458	13607	13375	17296
Actuation Set	Contact	Contact	Contact	Contact
Actuation Actual	No	No	No	No
Mark Warhead	16	16-1	16-1	16-1
Serial No.	4164	3556	9802	12433
Explosive	TPX	TPX	TPX	TPX
Firing Interval	0	10	12	10
Type Spread	0	1 L	1 R	2 L
Sea Conditions	Calm			
Overhaul Activity	Naval Section Base, Navy #245.			

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(H) ATTACK DATA (CONT.)

U.S.S. COD (SS224) GUN ATTACK NO. 1 PATROL NO. 4

Time 1633 H Date 13 August 1944 Lat. 05-28.1' S.
Long. 125-08.5' E.

Target Data - Damage Inflicted

Description:

Target was large amphibious vessel similar to our LSTs. See narrative for sketch.

Sunk: None

Damaged or Probably Sunk: None. Observed three close overs on in deflection; one possible hit.

Details of Action

Target's size had been underestimated as had been the range. No gun had been noted on stern but as evidenced by his return fire one was present.

Target commenced zigging radically after first round, with all firing being done at average range of 10,000 yards.

Expended 22 rounds of 4"50 caliber H.C. ammunition.

No difficulties were experienced with 4" gun.

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(I) MINES

No mines.

(J) ANTI-SUBM MINE MEASURES AND EVASIVE TACTICS

During depth charging on 16 July no pinging was heard. It is believed that A/S vessel placed first (and closest) depth charge pattern by his last observation of periscope. Went deep under sharp thermocline commencing at 150' and fish-tailed at 2/3 speed. A/S vessel crossed ahead several times, at which times we turned toward him. Otherwise tried to keep him astern.

On 3 August, in moonlight, a medium AK or AP-AK with one escort sighted COD on her port (unprotected) quarter at range of 3500 yards. This vessel signalled to her escort, reversed course, and attempted to ram. A poor tactic.

It is believed that sailboats are used for patrol in the GULF of BONI.

(K) MAJOR DEFECTS AND DAMAGE

C. & R.

On 13 July 1944, the after connecting rod bearing on the trim pump developed a squealing noise and on examination lower half the bearing developed to have wiped. Bearing was cleaned and scraped and given an all around clearance 007. No further trouble has been experienced. It is believed that on reassembling after the last refit proper clearances were not given to this bearing or that a piece of foreign matter clogged the oil rings. On July 25 lub oil cooling coil on the trim pump ruptured causing the crankcase to be flooded with salt water. The pump was torn down and both ends of the coil were plugged, crankcase and bearings flushed out and new oil and bearings put in. The pump has given more or less continuous operation without benefit of the cooling coil for the entire patrol and no abnormal heating has occurred. This is the second time this casualty has occurred aboard this vessel on war patrols and it is believed this was caused by faulty material in the cooling coil.

On 25 July 1944 a rag was sucked into No. 1 low pressure blower through the silencer and became caught in the propeller. No noticeable damage resulted after the rag was removed. This casualty would never have occurred had there been a strainer over this suction inlet of the blower. This will be remedied on this refit. This casualty will not occur again.

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

C.&R.(Cont.)

On 25 July 1944 during a routine ir charge the circulating water pressure on #2 high pressure air compressor dropped to 3 pounds. Investigation disclosed that the after ball bearing on the impeller shaft of the circulating water pump had deteriorated and the tachometer drive on the end of the shaft had sheered off. Since the proper bearing wasn't aboard, the shaft was turned down .031 and another bearing fitted. When installed, this jury rig operated satisfactorily. In Darwin a spare was received and installed.

Torpedo and Gunnery

Torpedo No. 46140 was found to have a high pressure air leak at the soldered connection to the starting connection. Flask pressure had dropped to 1600 psi. Removed afterbody and pulled the reducer body from bulkhead. The connection was resoldered by ship's force and torpedo reassembled. The connection gave way again at 2600 psi so the above process was repeated. The torpedo was charged to 2800 psi and no further leakage was noted.

Torpedo No. 46140 which had been loaded into #9 tube was found to have $2\frac{1}{2}$ gallons of water in afterbody after being submitted to 20# pressure for 30 minutes. Torpedo was given normal routine for flooded afterbody and reloaded into tube.

Torpedo No. 41225 was found to have eight gallons of water in afterbody after being submitted to 20# pressure for 45 minutes. Torpedo was given normal routine for flooded afterbody and reloaded into tube.

Engineering

#1 Main Engine

On 9 July while #1 M. E. was running at 75% K.W., 750 R.P.M. a knock developed and the engine was shut down for inspection.

Inspection showed bearing metal in the crankcase, #4 connecting rod bearing badly burned and the two halves separated by $3/4"$. The connecting rod was forced over against the crank pin web leaving a $3/8"$ space between #4 and #12 bearing shells.

Removal of the damaged parts showed all split pins in place, oil holes free, oil draining from the pistons and from the gap between the bearing halves. No. 4 upper

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

Engineering (Cont.)

bearing half was fused to the connecting rod, the bearing metal completely gone, and the bearing back pounded into the oil groove of the connecting rod.

The crankpin on the No. 4 side was scored to a depth of .035; the journal on No. 4 was scored to a depth of .069 in diameter. The piston and connecting rod showed no signs of damage.

No. 12 upper bearing half showed wear, cracking and some foreign metal on the forward upper side. Apparently a piece of foreign metal (possibly a split pin) had become lodged between the upper halves of bearings #4 and #12. This foreign metal caused a gouging effect between the upper halves of No. 4 and No. 12, overheating and distorting the metal. The source of the foreign metal could not be found though a thorough inspection was made.

No. 4 bearing was renewed during the last refit and at the time of the casualty the engine had a total of 230.2 hours of operation. Several crankcase inspections have been made since the refit, the last one being made on 5 July. At that time no signs of wear were found.

The ship's force was unable to repair the damaged journal; No. 4 unit was cut out; all burrs removed from the No. 12 side of the crankpin and a new brass-backed bearing installed. The engine was then put back in service at reduced power and operated satisfactorily for eight weeks.

#3 Main Engine Muffler

No. 3 main engine muffler ruptured due to electrolytic action, causing excessive noise and emission of sparks. For accessibility to repair the holes, it was necessary to cut a twelve by sixteen hole in the metal deck plating directly above the muffler elbow. The metal cut away was used as patching material. A patch was welded over a nine by three inch hole in the muffler elbow and bent down and spotted at the bottom. An attempt was made to weld a patch over the hole between the forward flange and the muffler, but due to the thickness of the flange metal this could not be done with the material available. The muffler was too thick to weld.

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

Engineering (Cont.)

In place of the above, the muffler by-pass line was cut away in such a manner that the water discharge quenches any sparks that may escape.

Subsequently No. 4 main muffler elbow ruptured due to electrolytic action and this was repaired in Darwin by welding a patch over the elbow.

Since that time No. 1 main muffler and No. 4 main muffler have developed additional holes.

It will be necessary to renew in all probability all four main mufflers and elbows during this refit. This is the second complete change of mufflers on this vessel in only four war patrols. It is believed that new design would be in order with a heavier gage metal used throughout and heavy reinforcements put in the elbows at the obvious weak points.

No. 1 Main Motor

No. 1 main motor gear end bearing developed a clattering noise while at deep submergence. The shaft was stopped and the bearing examined.

This examination showed wiping of the bottom half of the bearing. The journal adjacent to the bearing was heavily scored and burned and metal had carried over to the bearing causing the results above.

The cause of the casualty was shown to be the journal lifting bridge had not been properly cleared of the journal upon reassembly. One of the jacking studs was tight in the raised position. This bearing was inspected by the refit crew during the March refit and has not been inspected since.

The bearing was scraped and pressure on the wiped area was relieved slightly. All burrs and rough spots were stoned smooth on the journal and the lifting bridge adjusted. The motor was put back on load and performance was then normal.

High Pressure Air Compressor

Due to a line voltage ground on the bottom inter-pole of No. 1 high pressure air compressor, and unsuccessful attempts to remedy in place, the coil was removed and replaced with a spare coil.

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

The coil was found to be impregnated with salt water which had collected in the bottom of the motor casing. This water entered the motor from the pump room bilges when negative tank was vented inboard with a down bubble on the boat. Baffle will be installed.

Lower Fresh Water Gasket, #2 Main Engine

At 1106 on 5 August, the lower fresh water gasket on #12 unit of #2 main engine exhaust elbow water jumper carried away. The engine was stopped and the gasket renewed. The casualty was caused by deterioration of the gasket material. The engine was back in commission at 1313.

Fuel Line to Injector No. 13, No. 4 Main Engine

At 1752 on 13 August, a leak developed in the fuel line to the injector of No. 13 unit on No. 4 main engine. The line which had a faulty weld was renewed with a spare and the engine was back in commission at 1827.

D.R.A.I.

On 1 August 1944 the longitude indication of the D.R.A.I. failed completely. The latitude connection crank arm appeared to be rubbing against the driven disc of the latitude connection mechanism, and sufficient stock was filed off the back of this arm to insure clearance.

About 20 August 1944 the longitude indication failed again. When the D.R.A.I. had been removed from its case the mechanism was working properly. It is believed that the driven disc, which is spring loaded to provide friction against a driving wheel, was forced in a lateral direction along its shaft by a noticeable eccentricity in the disc and stuck there, even against the push of the spring. The slight shock of removing the mechanism from the case might easily have released the bind in the shaft of the disc.

It is recommended that the disc be trued upon its shaft and that the shaft be freed so that it is perfectly free to move in a lateral direction.

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(K) MAJOR DEFECTS AND DAMAGE (CONT.)

Master Gyro Compass

On 28 July 1944, #1 rectifier tube, type C6A, Serial #82549, failed after 7862 hours of operation.

On 13 August 1944 its replacement, type C6A, Serial #94044, failed after 363 hours of operation.

The circuits controlling the operation of the tubes have not been checked, but the tubes appear to function in a normal manner.

About 27 July 1944 the south rotor, serial #131-B, started losing vacuum. On 29 July 1944 the rotor was removed from the compass, a vacuum pumped, and all case screws tightened. The leak was slowed to approximately 1 inch per day but not stopped.

Vacuum was pumped subsequently on 7 August, 17 August, and 22 August, but no other work performed.

(L) RADIO

See narrative for details of transmission of COD scri ls, jamming encountered, and note of excellent servicing received from VIXØ, NPM and Radio BELCONNEN.

Radio reception was in general very good. 16150 Kcs. was valuable in the MNILA area during the day. 12630 Kcs. was at strength 4 with little or no jamming in MKASSAR area in July. 9250 Kcs. was weak and frequently jammed out during all of July.

All signs were weak in the CELEBES area from 2000 GCT to 2400 GCT during August.

The frequencies recommended by VIXØ for transmitting were used with good results.

No material casualties.

It is recommended that VIXØ repeat messages to a greater extent, in lieu of transmitting his call over and over again. In particular, the time between 0900 GCT to 1200 GCT could be well utilised in sending contact reports and other items of an urgent nature in place of leaving them for the 1200 schedule.

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(M) RADAR

SD-2 (Twenty-five minutes lost during patrol.)

Failure of 8014A tubes occurred after 30 hours of operation. Failure was probably caused by the keying relay installed during the 1st refit. Relay was disconnected and keying was effected by turning up the variac, gradually impressing the voltage on the tubes. A stop was installed at the proper variac setting. Very effective detection resulted at an average range of about 15 miles.

Failure of condenser 255 occurred after more than a year of operation. Failure of one soldered AC lead occurred.

SJ-1 (No time lost during patrol.)

Performance was good. Magnetron was renewed after 1½ patrols due to low power output. The spare magnetron oscillated on two frequencies and was replaced after 30 hours of operation.

The superlative performance and reliability of the radar equipment is due in no small measure to the careful supervision of Lt.(jg) T. C. HURST, III, USN. and to the professional competence of John WALLACE, RPLC, USNR.

(N) SOUND GEAR AND SOUND CONDITIONS

Sound conditions south of LOMBOK STRAIT were only fair due to high noise level and a great variety of fish noises. Depth of water here is approximately 1400 fathoms. On 17 and 18 July observation of sound conditions around C. BRA ISLAND revealed only medium noise level. Fish noises were light during these two days. Depth of water here was 100 fathoms and ranges to land were from 20 to 140 miles, during observations.

On 27 July in the BANDU SEA enroute to DRAKE noise level was fairly low and sound ranges were estimated at 20,000 yards. On August 20 in the vicinity of OMBAI STRAIT sound conditions were observed to be very good. Normal fish noises and low noise level.

Listening ranges in vicinity of LIFUMATOLA ISLAND on two occasions observed to be approximately 22,000 yards.

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(N) SOUND GEAR AND SOUND CONDITIONS (CONT.)

Only sound gear casualties that occurred on this patrol were due to depth charging. During the depth charging on 16 July, several of the commutator bars on the starboard sound head training motor were sprung away from the shaft causing a high spot. The shafting to the training gears was misaligned to the extent that about eight teeth were sheared from the large gear and three from the small gear on the limit switch gear assembly. The heavy jars caused the fan to rub against the field coils and scrape insulation from these coils. The commutator bars were forced back and sanded down to correct size; this eliminated the sparking and knock. On 20 July the armature had to be removed and a cut taken on commutator and fan as the assembly was discovered to be slightly out of line. The motor was out of commission approximately ten hours.

(O) DENSITY LAYERS

Green- wich	GCT			Top & Bottom of Layer	Change	Pounds Flooded
Date	Time	Lat.	Long.			
7/8/44	0700	13-38.5S.	115-05.7E.	None	0	3000
7/8/44	2146	10-57.3S.	115-36 E.	140-300	-6	None
7/9/44	0700	09-15 S.	115-42 E.	None	-10	None
7/10/44	0131	06-39.2S.	116-34.2E	None	0	None
7/10/44	2203	06-57 S.	116-22E.	215-240	-1	2500
7/11/44	0055	02-20 S.	118-27 E.	120-280	-13	10,000
7/12/44	2340	01-31 N.	119-27.9E.	140-170	-2	None
7/13/44	2200	04-42 N.	119-42 E.	140-300	-1	1000
7/14/44	2055	12-43 N.	120-42 E.	230-300	-5	None
7/15/44	0000	12-22.2 N.	119-23 E.	200-300	-8	None
7/16/44	2325	11-42 N.	117-46 E.	170-260	-3	None
7/17/44	1537	12-23.5N.	116-26.8E.	200-330	-8	None
7/18/44	2100	13-45 N.	119-30 E.	200-300	-5	None
7/19/44	2055	14-24.9N.	119-41 E.	200-280	-5	3100
7/21/44	2258	08-01 N.	120-14.3E.	140-300	-9	None
7/22/44	2123	04-21 N.	120-34 E.	240-300	-2	None
7/23/44	2100	02-55 N.	125-45 E.	160-300	-6	3000
7/24/44	2238	01-48 S.	126-21 E.	200-240	-3	None
7/25/44	2206	02-48 S.	126-00 E.	200-300	-3	2700
7/27/44	0907	06-58 S.	126-18.2 E.	None	0	None
7/27/44	2324	09-38 S.	128-10.4 E.	280-305	-1	None
8/1/44	2314	05-50 S.	126-04 E.	None	0	None
8/2/44	1820	01-45 S.	126-25 E.	240-305	-3	None
8/2/44	2146	01-50.5 S.	126-34.3 E.	160-250	0	None
8/3/44	2100	02-01 S.	125-31 E.	None	0	None
8/4/44	2140	02-16.2S	123-42.6E.	None	0	None

(O) DENSITY LAYERS (CONT.)

Green- wich Date	GCT Time	L t.	Long.	Top & Bottom of Layer	Change Pounds	Pounds Flooded
8/5/44	0115	02-40	S. 123-07.8E.	160-240	-3	None
8/5/44	2130	02-53	S. 122-24 E.	160-240	-4	None
8/6/44	2100	02-53	S. 122-28 E.	160-300	-7	None
8/8/44	2125	04-28.5	S. 124-44.2 E.	260-280	-6	None
8/9/44	0050	04-09.8S.	124-41.9E.	170-200	-1	None
8/9/44	2147	05-20.2S.	121-04.1 E.	100-300	-10	2000
8/10/44	2130	06-28	S. 120-41 E.	100-300	-7	None
8/11/44	0009	05-21.4	S. 121-02.8 E.	100-180	-5	None
8/11/44	2330	05-24.9S.	121-03.9E.	140-240	-6	None
8/12/44	2335	06-21	S. 124-00 E.	260-300	-1	None
8/13/44	2126	04-26	S. 126-29.8E.	260-300	-3	None
8/14/44	2141	02-27.5S.	126-45 E.	200-300	-5	None
8/14/44	2320	02-26.8S.	126-45.4E.	160-200	-3	None
8/15/44	0615	02-23.5	S. 126-42.5 E.	None	-2	None
8/15/44	0423	03-23.5	S. 126-45.5 E.	None	-2	None
8/16/44	0219	03-38.5S.	125-11.8 E.	None	0	None
8/17/44	2202	05-21.8	S. 121-04.5 E.	100-300	-12	7,000
8/18/44	1205	05-01.2	S. 121-16.8E.	90-300	-11	6,000
8/20/44	0851	11-52.1S.	121-39 E.	None	0	None

(P) HEALTH, FOOD, AND HABITABILITY

Health of crew excellent. One sick day (gastroenteritis), patient transferred at DAHWIN. One sick day (wound, traumatic, large finger, right hand); electrician's mate placed finger in belt drive of distiller.

Health of prisoner poor. When taken aboard on 10 August 1944 he was suffering from shock, abdominal pain, multiple contusions, internal hemorrhage, and nausea. He was treated with morphine, luminol, and applications of heat and was fed intravenously. Condition improved rapidly under care of pharmacist's mate, only a few contusions and slight feeling of apprehension remaining. For successfully nursing this prisoner of war back to health, great credit is due to LASKOWSKI, Walter E., CPhM(AA), USN.

Food excellent. Good cooks. Only 3 feedings of steak, how ver.

Habitability excellent.

(Q) PERSONNEL

Very aggressive.

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(R) MILES STEAMED - FUEL USED

FROM FRAMPTON to BARRIER	1493.5 Mi.	21,610 Gals.
NORTH of BARRIER	4222.2 "	55,255 "
BARRIER to DARWIN	479.6 "	5,165 "
DARWIN to BARRIER	495.1 "	6,075 "
NORTH of BARRIER	4276.5 "	60,490 "
BARRIER to FRAMPTON	1975.4 "	28,785 "

(S) DURATION

Days enroute to area	7
Days in area	18
Days enroute to and from Darwin	5
Days in area	18
Days enroute to FRAMPTON	6
Days submerged	12

(T) FACTORS OF ENDURANCE REMAINING

Torpedoes	Fuel	Provisions	Personnel
0	18,000 Gals.	15 Days.	30 Days.

Limiting factor this patrol: Torpedoes.

(U) REMARKS

(V) PERSONNEL

No. of men on board during patrol	- 74
No. of men qualified during patrol	- 13
No. of men advanced in rating during patrol	- 13
No. of qualified men on board at end of patrol	- 62

SUBMARINE SQUADRON SIXTEEN

FC5-16/FB5-161/A16-3
Serial (024)

Care of Fleet Post Office,
San Francisco, California.
30 August 1944.

FIRST ENDORSEMENT to:
USS COD War Patrol Report
No. 4 dated 30 August 1944.

C-O-N-F-I-D-E-N-T-I-A-L

From: Commander Submarine Squadron SIXTEEN (Administrative).
To : Commander-in-Chief, U. S. Fleet.
Via : (1) Commander Submarines, SEVENTH FLEET.
 (2) Commander, SEVENTH FLEET.
Subject: U.S.S. COD (SS224) - Report of Fourth War Patrol - Comments on.

1. The fourth war patrol of the U.S.S. COD, from 3 July to 25 August 1944, was of fifty four days duration of which thirty six days were spent in the area. Aggressiveness and good area coverage were much in evidence during this patrol.

2. Ten aggressive torpedo attacks and one gun attack were made on enemy shipping. Out of the first load of twenty-four torpedoes only one sure hit was made. Undoubtedly poor torpedo performance accounted for some of the misses. Out of the twenty four torpedoes loaded at Darwin eleven hits were made.

Attack No. 1 - A daylight submerged attack on an escorted convoy of three enemy ships after an end around chase. The first six torpedoes (Three at each of two AK's) were fired with fairly large gyro angles and comparatively long torpedo run. Both targets maneuvered to avoid and all torpedoes missed. The four torpedoes fired two minutes later at the escort ship were fired with large gyro angles and very small track angles and all missed.

Attack No. 2 - Following another end around on the same convoy Cod made a night surface attack with three torpedoes from an excellent position with depth setting three feet. All missed and counteraction by the escort prevented further attacks.

Attack No. 3 - A night submerged attack on two large ships with five escorts. Six torpedoes were fired with large gyro angles and small track angles at an escorting destroyer. One hit was heard, possibly on a trailing escort.

Attack No. 4 - A night surface attack on a convoy of four AK's and five escorts. Four stern tube torpedoes fired at an AK missed.

Attack No. 5 - A night surface attack on a convoy of three AK's and four escorts. One torpedo fired at an AK was heard to hit.

Attack No. 6 - A night submerged attack with four torpedoes on an AK or AP-AK with one escort. Three hits were seen.

G. W. PATTERSON, Jr.

H. S. O'LEARY

6. The Commanding Officer, Officers and Crew are congratulated for a highly aggressive patrol and the damage inflicted on the enemy.
5. The health and morale of the crew on return from patrol was excellent.

4. The COD will be refitted during the normal period. Number four journal on number one main engine will be ground down and an oversize bearing fitted. All main mufflers and elbows will be replaced with mufflers and elbows manufactured of 3/8" plate. IFF equipment will be installed this refit.

3. The successful use of hand keying of SJ radar for communication on two occasions is noteworthy.

- Attack No. 10 - A night submerged attack on an unidentified ship. Four torpedoes were fired and no hits were observed.

- Attack No. 9 - Following an ineffective gun attack, fired four torpedoes on a night submerged attack at a large landing craft. Three hits were seen and target sank.

- Attack No. 8B - After an end around, attacked the same target with four more torpedoes. One more hit was made and the target sank.

- Attack No. 8A - A night surface attack on an unidentified enemy ship with four torpedoes which produced one hit that did not damage the target sufficiently to stop him.

- Attack No. 7 - A day light submerged attack on a small AK or naval auxiliary with four torpedoes. Three hits were seen and the target sank immediately. One prisoner was picked up.

Subject: U.S.S. COD (SS224) - Report of Fourth War Patrol - Comments on.

C-O-N-F-I-D-E-N-T-I-A-L
Serial (024)
PC5-16/FB5-161/A16-3
Gare of Fleet Post Office,
San Francisco, California.
30 August 1944.

FE24-71/A16-3

UNITED STATES NAVY

12a/gr.

Serial: 01006

10 September 1944.

C-O-N-F-I-D-E-N-T-I-A-L

SECOND ENDORSEMENT to:
USS COD Conf. ltr. A16-3
Serial 03 dated 25 August
1944. Report of Fourth
War Patrol.

From: The Commander Submarines, SEVENTH FLEET.
To : The Commander-in-Chief, UNITED STATES FLEET.
Via : The Commander, SEVENTH FLEET.
Subject: U.S.S. COD (SS224) - Report of Fourth War Patrol -
Comment on.

1. The first phase of COD's Fourth War Patrol was conducted in the assigned area off MANILA. Following a reload at DARWIN another short patrol was conducted in FLORES and MOLUKKA SEAS. This was the first war patrol for the new Commanding Officer, Lieutenant Commander J. A. ADKINS, U.S.N., in command of a Fleet type submarine.

2. Both phases of the patrol were aggressively conducted. Surface running was judiciously employed whenever practicable, and night surface attacks were driven home to good firing ranges.

3. While poor torpedo depth performance or exploder failure may have accounted for the lack of results on attacks No. 2 and 4, it is considered that the misses on the other attacks in the first phase of the patrol were probably due to the use of large gyro angles, and in some cases, of unfavorable track angles. This is particularly true on attacks No. 1-B and 3. It is noted that small gyro angles and favorable track angles were employed during the second phase, and that forty-six percent hits were obtained.

4. This patrol is designated "successful" for the award of the Submarine Combat Insignia.

5. The Force Commander congratulates COD Commanding Officer, Officers, and Crew, on inflicting the following damage on the enemy:

23 SEP 1944

RECEIVED

1782

FE24-71/A16-3

UNITED STATES NAVY

12a/gr.

Serial: 01006

10 September 1944.

C-O-N-F-I-D-E-N-T-I-A-L

SECOND ENDORSEMENT to:
USS COD Conf. ltr. A16-3
Serial 03 dated 25 August
1944. Report of Fourth
War Patrol.

Subject: U.S.S. COD (SS224) - Report of Fourth War Patrol -
Comment on.

SUNK

1 - AK (Medium - EU) - - - - - 4,000 Tons (Attack No. 6)
1 - AK (Naval Auxiliary - EU) - - - 2,000 Tons (Attack No. 7)
1 - AK (Small - EU) - - - - - 2,000 Tons (Attack No. 8B)
1 - LSM (Auxiliary transport - EC) - - 1,000 Tons (Attack No. 9)

TOTAL - 9,000 Tons

DAMAGED

1 - AK (Medium - EU) - - - - - 1,400 Tons (Attack No. 5)

GRAND TOTAL - 13,000 Tons

ORIGINAL COPY

R. W. CHRISTIE.

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THIS REPORT WILL BE DESTROYED PRIOR
TO ENTRY INTO ENEMY CONTROLLED WATERS.

10 04245

P. F. STRAUB, JR.,
Flag Secretary.

Reg. No. 13830
R. S. No. 10 04245

UNITED STATES FLEET
COMMANDER SEVENTH FLEET

A16-3(F-3-4/whr)

Serial 02663

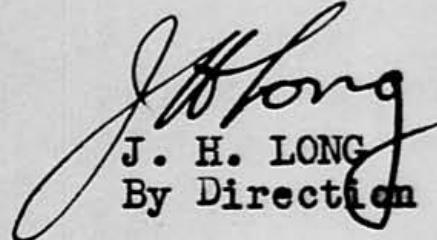
23 OCT 1944

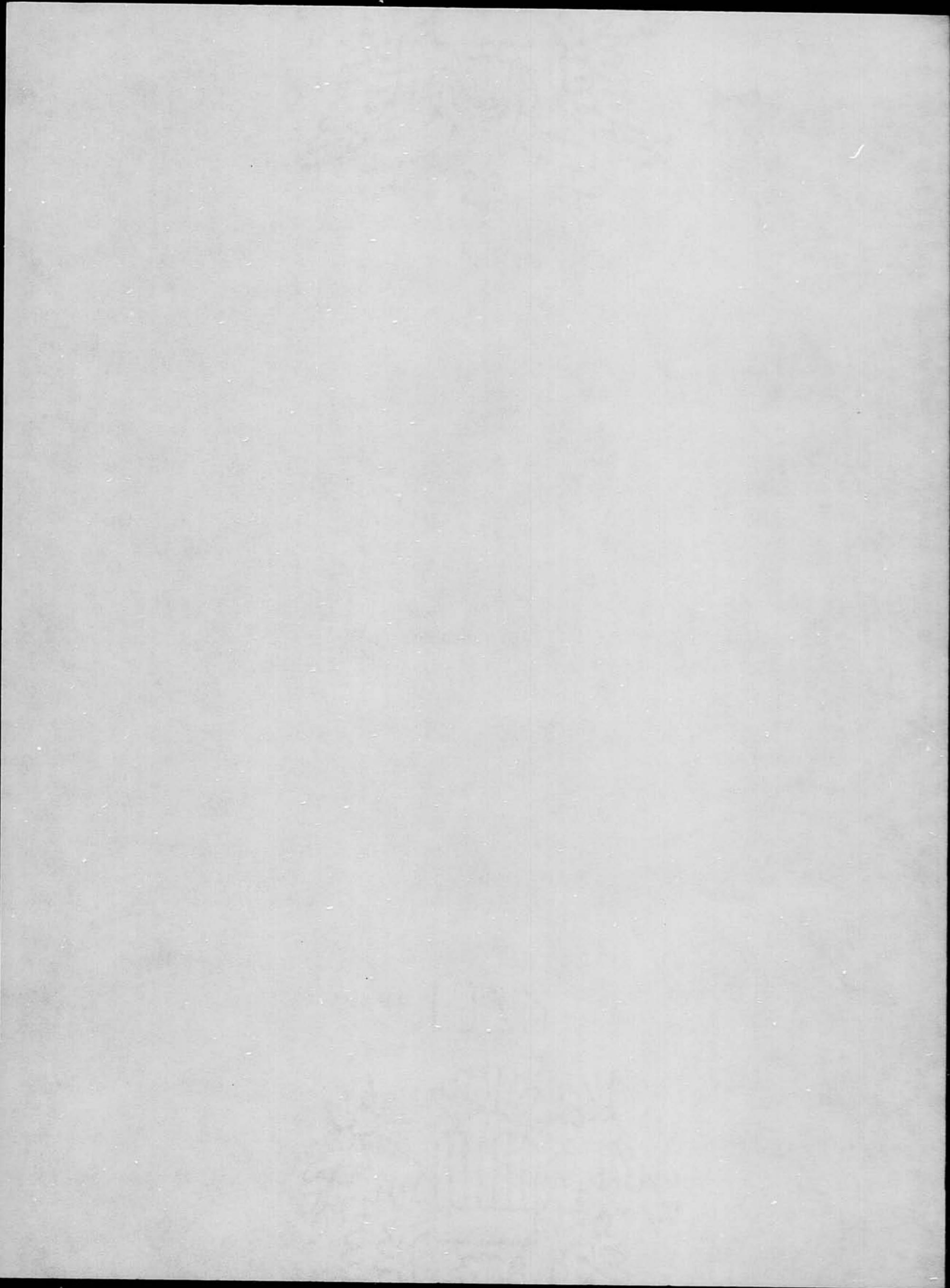
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THIRD ENDORSEMENT to:
CO, U.S.S. COD Conf.
Ltr. A16-3 serial 03
dated 25 August 1944.

From: Commander Seventh Fleet.
To : Commander in Chief, United States Fleet.
Subject: U.S.S. COD (SS224) - Report of Fourth War
Patrol.

1. Forwarded.


J. H. LONG
By Direction



SS224/A16-3
(06)

U.S.S. COD (SS224)
c/o Fleet Post Office
San Francisco, California.

20 November 1944

DECLASSIFIED

From: The Commanding Officer, U.S.S. COD (SS224).
To : The Commander-in-Chief, United States
Fleet.
Via : Official Channels.
Subject: U.S.S. COD, Report of War Patrol
Number Five.
Enclosure: (A) Subject Report.
(B) Track Charts (for ComSubPac only).

1. Enclosure (A), covering the fifth war patrol of this vessel, conducted in waters west of LUZON and MINDORO during the period 18 September 1944 to 20 November 1944, is forwarded herewith.

2. Report of War Patrol of Coordinated Search and Attack Group consisting of U.S.S. COD and U.S.S. RAY has been submitted separately.

J. A. Akles

J. A. AKLES.

DECLASSIFIED-ART. 0445, OPNAVINST 5510.1C

BY OP-0989C DATE 5/25/72

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97987

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(A) PROLOGUE

25 August returned to FREMANTLE, W. A. from War Patrol No. 4. Refitted by U.S.S. GRIFFIN and Second Crew of Sub. Div. 122. Sailing delayed one (1) day by docking to repair leak between No. 2D M. B. and 3 B F. B. tanks. Conducted two (2) days independent operations and three (3) days tactical exercises, including firing of three (3) torpedoes and one night of exercises against convoy with plane cover.

(B) NARRATIVE

Officers and Chief Petty Officers attached.

<u>Name</u>	<u>Rank or Rate</u>	No. of Patrols (Prior to this Patrol)
ADKINS, J. A.	Comdr.	4
BECKMAN, K. F.	Lieut.	8
PODOREAN, C.	Lieut.	3
HURST, T. C., III	Lieut.	2
FAHR, S. M.	Lt. (jg)	4
SMITH, W. K.	Ensign	1
KIMBALL, F. S.	Ensign	9
CLOUGH, R. H.	Ensign	0
KRUBEL, F. J.	Ensign	0
YARBER, P. J.	CQM(PA)	4
HOWARD, J. D.	CTM(AA)	7
SCHRECK, W. R.	CMoMM(AA)	4
LUDWIG, J. K.	CRM(AA)	11
WALLACE, J.	CRT(AA)	4
LASKOWSKI, W. E.	CPhM(AA)	4

18 September

1400 H Underway for DARWIN, N. T., in company with BLUEGILL and ANGLER in accordance with CTG 71.1 Op. Ord. for patrol off western coast of LUZON. Conducted convoy training with ISABEL and MILDURA.

19 September

0613 H SD contact, 11 miles. A/C Contact No. 1. Search plane. On radar screen intermittently for an hour. Sighted at 0705. Conducted training with BLUEGILL and ANGLER.

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20 September

Training.

1740 H Released BLUEGILL and ANGLER to proceed to EXECUTIVE GULF.

2048 H SJ Radar contact bearing 000(T), 14,150 yards. Ship Contact No. 1. Tracked. Closed to look. Corvette size, southbound, speed 15, zigging. Avoided.

21 September

Training dives

22 September

Training dives.

1035 H High periscope sighted U.S. submarine bearing 333(T), distant about 20,000 yards. Ship Contact No. 2. Southwesterly course. Avoided.

1227 H High periscope sighted unidentified vessel bearing 258(T) about 24,000 yards. Ship Contact No. 3. Appeared to be submarine. Commenced tracking. Course 070, speed 13, not zigging, slight port angle on bow, astern of us. No pip on SJ.

1239 H Changed course to 250(T) to intercept. Slowed. 250 mc signal on APR. Slight interference on SJ. Sent challenge by SJ. No reply.

1252 H Submerged at estimated range 20,000. Closed target. Obtained two bearings of target by planing up to 55 ft.; only mast or periscope was visible. Obtained third bearing on target, noting what appeared to be a submarine superstructure, box-like in outline, no mast, periscope nor tapered shears visible.

1304 H No target in sight at observation. Planed up. Searched with periscope continuously for five (5) minutes, sweeping back and forth 20° on either side of estimated target bearing. No periscope visible. Horizon clear. All clear by sound.

1322 H Secured from battle stations. Opened target track to north.

1654 H Surfaced.

2100 H Sent COD ONE to CTF 71, giving ETA DAKIN, reporting two contacts of today and asking if last contact could be ANGLER.

2355 H Decoded ANGLER ONE, giving his 2200 position and ETA DAKIN. Contact could have definitely been he. This was confirmed by CTF 71.

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23 September

Training.

1255 H SD interference.

1350 H High periscope sighted ANGLER. Exchanged recognition signals and calls by SJ. Made approaches on each other. All lookouts observed periscope feather as ANGLER made battle surface. Ascertained by visual that Ship Contact No. 3 had not been ANGLER, to best of his knowledge.

24 September

Training. Made battle surface.

25 September

0058 H Numerous contacts with friendly planes.
1021 H Sighted channel buoy and entered DARWIN with escort. Moored alongside COUCAL. Commenced loading torpedoes, fueling and making voyage repairs. Ascertained from C. O. ANGLER his exact position, course and speed at time of Ship Contact No. 3, obtained information of allied subs in area from him, obtained information of allied merchant shipping from intelligence officer, R.A.N., at DARWIN. Sent report to CTF 71 via COUCAL.

Received modification to OpCrd by despatch from C.C. COUCAL. New orders call for coordinated search and attack by RAY and COD in areas west of southern LUZON and PALAWAN. Sent time and place of desired rendezvous with RAY to CTF 71 via COUCAL.

26 September

0700 H Drills.

0800 H Underway from alongside COUCAL. Stood out of harbor. Bow plane's failed to rig in during test. Fire in rigging panel. Cleared electrical circuits but could not reduce heavy over-load.

1244 H Reversed course for return to DARWIN. Sent COD TWC to CTF 71, giving ETA at rendezvous off DARWIN.

COUCAL decoded the message from the Baker schedule, informed the port authorities, and got underway immediately to meet us and escort us in. C.O. COUCAL attempted to raise us by

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voice on harbor frequency, informing us of his actions. COD was guarding this frequency but did not receive the message.

1836 H Was met by COUCAL in swept channel and entered harbor. Our bombing restriction was still effective from our outgoing passage, and we managed nicely in entering this defended port by the expedient of challenging all patrol craft and planes before they had an opportunity to challenge us.

2033 H Moored alongside COUCAL. Commenced disassembling bow plane rigging gear. Succeeded in freeing up mechanism, with help of COUCAL. Meanwhile, topped off in fuel, water and lub oil.

27 September

0838 H Repairs completed. Sent word to CTF 71 via COUCAL that COD did not desire change in time of rendezvous with RAY. Underway.

1131 H Submerged.

1202 H Surfaced. Numerous contacts with friendly planes.

28 September

0305 H SJ contact bearing 024(T), 19,300 yards. A/C Contact No. 2. This was not recognized as an aircraft until it had been lost at 19,600 yards on southeasterly bearing.

0324 H SJ contact bearing 221(T), 20,800 yards. A/C Contact No. 3. Southerly course. Lost contact at 22,800 yards.

0401 H SJ contact bearing 299(T), (port bow), 21,440 yards. A/C Contact No. 4. SD picked up this contact at 6 miles, closing fast. Plot showed 110 knots, course 130(T). Bearing was drawing aft very slowly.

0405 H Submerged.

0432 H At 200 feet could hear a squeal in port shaft at 120 RPM. Slowed to 80 RPM. Disappeared.

0450 H Surfaced. Engine air induction valve failed to open. Operated by hand. It was beyond the strength of one man to close this valve by hand. Linkage pins frozen.

0522 H Submerged. Working on induction valve.

0823 H Surfaced. Working on induction valve. Mechanism freed up by 0945.

1101 H SD contact 22 miles. A/C Contact No. 5. Lost contact at 24 miles but experienced strong interference on SD for 15 minutes.

1215 H Landfall on TIMOR. Had decided on as much surface

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running as possible in order to make rendezvous with RAY without undue fuel consumption. Accordingly attempted to run the passage east of TIMOR on the surface.

1316 H SD contact 20 miles. A/C Contact No. 6. BN signal. Faded.
1500 H Sighted plane, about 5 miles. A/C Contact No. 7. Submerged.
1815 H Surfaced.

29 September

0724 H Submerged.
0805 H Surfaced.
1624 H Sighted sailboat. Ship Contact No. 4. Avoided.
1918 H Sighted sailboat. Ship Contact No. 5. Avoided.

30 September

0755 H Submerged.
0828 H Surfaced.
1348 H Submarine submerged signal ejector cartridge came to surface about 1500 yards on starboard beam and exploded into a parachute smoke bomb of the proper color. Ship Contact No. 6. Left area on four (4) engines. (Had usual reaction of feeling very foolish when this happened; after shock had worn off, was beset by wonder as to who was getting better area coverage).
1444 H Sighted sailboat. Ship Contact No. 7. Avoided.
1724 H Sighted sailboat. Ship Contact No. 8. Avoided.
1934 H Weak SJ interference, apparently sweeping.
2346 H Sighted two (2) sailboats. Ship Contact No. 9. Avoided.

1 October

In MAKASSAR STRAIT, running along CELEBS shore during night.

0012 H SJ contact, 10,850 yards. Ship Contact No. 10. Thought it a sailboat, but on closing to investigate, identified as small patrol boat of SC type. Avoided.
0105, 0115, 0215, 0300 H Sighted sailboats. Ship Contacts Nos. 11, 12, 13, 14. Avoided.
0136 H Apparent BN interference on SD screen, followed by BN pips in an illegible code. Finally diagnosed as BN echoes returning from the CELEBS hills. See section (M) RADAR.

0204 H SJ interference bearing approximately 240(T).
Challenged. No reply.
0307 H SJ contact bearing 236(T), 25,400 yards. Ship
Contact No. 15. Strong interference from
same bearing. Challenged. No reply.
0357 H Sighted sailboat. Ship Contact No. 16. Avoided.
0442 H Challenged on SJ by Ship Contact No. 15. Re-
plied and exchanged calls with ANGLER.
0555 H Sighted mast or high periscope believed to be
ANGLER.
0614 H Sighted two (2) sailboats. Ship Contact No. 17.
Avoided.
0638 H Sighted sailing trawler. Ship Contact No. 18.
0641 H Submerged.
0805 H Surfaced.
0818 H Sighted three (3) sailboats. Ship Contact No.
19. Avoided.
0820 H Sighted first of numerous floating objects in
water, which included logs, palms, planks, and
one ship's life ring.
1041 H Sighted sailboat. Ship Contact No. 20. Avoided.
1155 H SD contact 20 miles. A/C Contact No. 8. Faded.
1420 H Decoded despatch to MINGO, lifeguarding off
BALIKPAPAN, telling of crew of nine (9) men from
a B-24 in water since yesterday, six miles from
CCD's present position. Commenced parallelgram
search around point given in despatch, investi-
gating objects in water. Decided to question
all sailboats.
1540 H SD interference.
1544 H Sighted ANGLER, followed by SJ challenge and ex-
change of calls. Gave ANGLER courses to steer
until dark to increase area of search. Con-
tinued search.
1758 H Sunset.
1923 H SJ contact 11,650 yards. Ship Contact No. 21.
Proved to native schooner. Manned 20 mm's
and went close aboard. English not understood.
No aviators. Continued up strait.
2342 H Transmitted COD TURE to CTF 71, giving negative
results of search by ANGLER and COD.

2 October

0159 H SJ contact 13,000 yards. Strong SJ interference
on same bearing. Challenged. No reply. Probably
ANGLER. Lost contact at 0323.
0523 H SJ contact 27,600 yards. Very sharp pip. Rain
squall.
0739 H Submerged.
0806 H Surfaced.

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0957 H SD contact 23 miles. A/C Contact No. 9.
Faded.
1820 H SJ interference bearing 102(T). Probably ANGLER.
2035 H Heavy rain. Pit log out of adjustment. No. sights for 24 hours. Poor landfall on SIBUTU PASSAGE. Resorted to fahrometer, sounding every 20 minutes.
2334 H SJ contact bearing 096(T), 12,850 yards. Strong interference on same bearing. Probably ANGLER. Challenged. No reply.

3 October

0105 H Entered SIBUTU PASSAGE.
0214 H SJ contact on ANGLER, astern, 10,150 yards. Could see him.
0335 H Exchanged recognition signals and plans for the day with ANGLER by SJ.
0533 H Sighted sailboat. Ship Contact No. 22. Submerged.
0915 H Surfaced.

4 October

0006 H Transmitted COD FCUR to CTF 71, giving plans for search to RAY.
0200 H SJ interference on port bow.
0315 H SJ contact 11,000 yards. Ship Contact No. 23. Exchanged recognition signals, calls and information with CERO by SJ.
0914 H Landfall on PANAY. Standing up through CUYO EAST PASS.
1352 H Submerged.
1747 H Surfaced. Standing over to APO EAST PASS.
2222 H Received voice message from RAY telling of his negative search results in area and suggesting patrol station for 5th. Sent him affirmative.

5 October

0004 H SJ contact 4,090 yards. Crossed bow from port to starboard, range decreased rapidly to 1500 yards, then opened. Tracked at more than 30 knots by TDC. Nothing in sight. Contact commenced steering various courses over land on starboard hand. Possibly a bird.
0527 H Submerged 15 miles north of APO REEF. Ran north and then west. Rain squalls and haze.
0852 H Sighted plane. A/C Contact No. 10.

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ATTACK NO. 1 AND ATTACK NO. 2

1250 H During one of the intermittent rain squalls which were present all day, and with visibility estimated at 7,000 yards, OOD sighted destroyer, brought ship to course for 90° track, and sounded the alert. (Ensign Franklin S. KIBBALL, USN). Ship Contact No. 24. During lulls in rain, C.O. made out formation of five (5) ships, consisting of WAKATAKE destroyer (identification not certain) followed by two small engines-aft vessels abreast, followed by a large tanker on the port near side, and a large AK on the starboard quarter of the tanker. Picked the tanker as primary target, and watched the WAKATAKE go by while closing track. (The control party wanted to shoot the WAKATAKE first). Could not identify target. It was a large, modern ship, engines aft, two masts with cross yards and booms topped up. Had raked bow and medium stack, both as to thickness and as to height. There was a small island forward of the gun. 80 turns gave 9.5 knots. The target resembled a U.S. Maritime Commission T-2 design more than any vessel in the Japanese recognition manuals. Used 100 ft. for height of mast and the ranges obtained thereby were checked to within three (3) seconds by torpedo. The AK on the tanker's quarter could not be identified in the visibility. It was fairly large. C.O.'s estimate:

1 Large Tanker (EU) 10,000 T.
1 Large AK (EU) 7,500 T.

Visibility very poor. Could barely make out masts at times. Target group zigged away. Waited for 90° angle on bow in order to check course.

1318 H Fired four (4) bow tubes at tanker, spread by periscope, 150% coverage, 6 ft. depth, average track 114°, average gyro 356°, average torpedo run 2400, and then fired two (2) at AK, spread by periscope at bow and stern, average track 101°, average gyro 009°, other data the same. Observed two hits on tanker, one forward and one aft, just about where aimed. Both hits were accompanied by large clouds of black smoke and fire. Great balls of fire billowed up from fore part of the vessel. Breaking up noises were heard, even through the hull. The tanker appeared to be done for. No hits were seen on

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the AK. Set depths 2 feet aft and commenced getting set up on WAKATAKE who had turned to his left and was headed for us. Turned right for a down-the-throat shot. Due to rain, could not see the WAKATAKE at every observation, usually could not see the top of his mast, but was getting a pretty good set-up with zero angle on the bow, and ranges did not matter much. Depth charges started going off 4.5 minutes after firing. Did not bother about them as long as I could see the WAKATAKE. Sound then picked up two vessels echo-ranging. One was apparently the WAKATAKE. Could not see the other. Depth charging noises changed from the old familiar bang to smaller, more frequent explosions with a sharp crack. These noises did not appear to be coming from the target. The control party, almost in unison, said "mousetraps." (Although I don't know what would be detonating them.) Took a look, WAKATAKE was showing 20° starboard angle on the bow. Chips started flying in front of the periscope. (Three. Solid Matter. Small). It may have been gunfire, but I was not sure. The situation was out of hand. Went deep. Ran silent. Fish-tailed. Could track one high speed set of screws and one slow speed set of screws, both echo-ranging.

When depth charging had ceased (only a few at this time), reloaded four (4) upper tubes forward.

- 1410 H Started up to periscope depth.
1420 H When passing 80 ft., depth charges started going off again. Large ones now. Estimated range to be 1500 yards and kept on coming up.
1424 H Up periscope. Visibility had improved. The WAKATAKE and one of the engines-aft ships were conducting a sweep and depth charging about 4000 yards ahead of us, crossing from port to starboard. Set depth 2 ft. forward and commenced approach on WAKATAKE. (The fire control party was now happy). From three observations plot showed WAKATAKE and escort to be steering in a circle of 2 miles radius. Their search would not bring them close to us for some time. Meanwhile two distinct fires were visible on the port hand, as well as smoke which appeared to be from a funnel. Rounds of bearings between looks at the WAKATAKE showed: