

SS394/A4-3

Serial: 010

U.S.S. RAZORBACK (SS394)
Care of Fleet Post Office,
San Francisco, California.

DECLASSIFIED

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

28 February 1948

From: The Commanding Officer.
To : The Chief of Naval Operations.
Via : (1) The Commander Submarine Division TWELVE.
(2) The Commander Submarine Squadron ONE.
(3) The Commander Submarine Force, U.S. Pacific Fleet.
(4) The Commander-in-Chief, U.S. Pacific Fleet.

Subject: U.S.S. RAZORBACK (SS394) - Report of Simulated War Patrol Number Two.

Enclosure: (A) Subject Report.
(B) Track Chart (ComSubPac only).
(C) Report of Periscope Photographic Reconnaissance of Yap Island (with Track Chart).
(D) Copy of Letter to Hydrographic Office.
(E) List of Food Consumed during 90 Days.

1. Enclosures (A) through (E) inclusive, covering the Second Simulated War Patrol of this vessel conducted from Pearl Harbor, T.H., via Canton Island, Sydney, Australia, Okinawa Jima, Tsingtao, China, Midway Island, to Pearl Harbor during the period 28 November 1947, to 28 February 1948, are forwarded herewith.

L. A. LAJAUNIE, Jr.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS-394) REPORT OF SECOND SIMULATED WAR PATROL

(A) PROLOGUE:

The U.S.S. Razorback entered San Francisco, Naval Shipyard on 23 June 1947 for an availability of 120 days. The following major alterations were completed during the overhaul: Installation of direct drive; WFA-1 Sonar; SS Radar; MK 18 Mod 1 Auxiliary Gyro; Rearrangement of Conning Tower; Rearrangement of Control Room; Installation of Ampere-hour Meters; Modification of hull opening indicator system circuit TR; Spindle type relief valves in FBT emergency vent valves; Spline drives for shaft revolution indicator system; Strongbacks provided for torpedo tube breech doors; Increased inner diameter for periscope bearings; Increased air conditioning compressor speed; Arranged stowage space of 5" ammunition for reduced allowance.

This vessel departed San Francisco Naval Shipyard 29 October 1947 for Pearl Harbor, T.H. On November 5 arrived Pearl and moored alongside U.S.S. Bushnell.

Ship was depermed at Becking Point, Pearl Harbor, T.H.

Two weeks of pre-patrol-training was held in the Pearl Harbor area. Four torpedoes and three gunnery exercises were fired. Commander D. T. Hammond, GSD-12, was training officer.

(B) NARRATIVE:

Officers and men on board and patrols made:

<u>NAME AND RANK</u>	<u>FILE NO.</u>	<u>WAR PATROLS</u>	<u>SIMULATED WAR PATROLS</u>
CDR L.A. LAJAUNIE, Jr.	0078819	10	2
LCDR R.M. CARROLL	0097004	10	1
LT E. PRIDONOFF	0141849	12	1
LT A.W. GILLIS	0283018	0	1
LTJG H.J. TRUEBLOOD	0390072	0	2
LTJG J. E. BONDS	0389382	2	2
ENS J. R. JOHNSON	0447542	0	2
ENS E. P. TRAVERS	0451026	0	1

ENLISTED PERSONNEL

<u>NAME</u>	<u>RATE</u>	<u>SERVICE NO.</u>	<u>WAR PATROLS</u>	<u>SIMULATED WAR PATROLS</u>
ANGLIER, D.T.	GM3	556 72 90	6	1
AQUINO, J.A.	STM1	583 34 32	0	1
ATKINS, L.L.	EM2	632 60 39	9	2

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

<u>NAME</u>	<u>RATE</u>	<u>SERVICE NO.</u>	<u>WAR PATROLS</u>	<u>SIMULATED WAR PATROLS</u>
ATWOOD, H.D.	CEM	385 79 58	6	1
BATCHELDER, C.E.	F2	568 31 89	0	1
BATES, E.C.	QM2	581 07 70	0	1
BERKEY, R.L.	QM3	733 77 94	0	1
BIBERDORF, C.C.	CMOMM	316 50 66	6	1
BRUNO, W.J.	FCS3	387 50 41	0	1
CARTER, W.J.	MMOM3	308 07 41	0	2
CHASE, L.E.	EM3	803 66 15	0	2
CLARK, E.F.	RM3	266 77 37	0	1
CLARK, W.H.	MMOM1	393 57 64	3	1
CLEVER, J.F.	SC1	614 04 73	0	1
CORBELL, R.N.	RM1	205 70 11	0	2
DAVIS, E.H.	SLTM	627 94 56	0	1
DONNELLY, J.R.	MMOM2	283 74 78	0	1
GERRARD, V.H.	MMOM2	877 95 91	2	2
GRAY, J.E.	SLRM	567 18 88	0	1
GUIDRY, C.J.	SM1	407 70 62	5	2
GURAL, W.S.	RM2	312 33 03	2	1
HALEY, E.J.	S1	225 76 69	0	2
HALL, A.L.	ST2	808 25 24	6	2
HAMMETT, G.C.	TM1	225 19 66	6	2
HAYES, C.W.	CEM	234 11 56	9	1
HENDRICKS, J.P.	S1	329 96 59	0	1
HORFMAN, M.H.	MMOM2	664 74 27	0	1
HUNTER, L.R.	ETM1	884 87 09	0	3
HUOT, J.	FLEM	798 37 51	0	2
JANNIRO, G.	CTM	223 27 71	5	2
JOHNSON, E.H.	F1	301 54 43	0	1
JOHNSTON, A.C.	TM3	356 71 16	1	2
JONES, L.C.	PHM2	889 71 90	0	1
KING, R.W.	ETM3	754 14 82	0	1
LAMB, O.L.	MMOM2	884 88 63	0	1
LANGLEY, H.W.	F1	790 28 59	0	1
LEWIS, P.A.	EM2	660 70 58	0	2
LIEBICH, W.F.	TM3	874 46 07	0	2
LOUGEE, M.H.	EM1	606 30 41	6	1
MATHER, R.A.	Y1	347 07 30	4	2
MAVIGLIA, F.A.	EM1	225 29 06	0	2
MC CORMICK, A.D.	S1	826 14 00	0	1
MC LAUGHLIN, P.F.	MMOM1	201 60 29	2	2
MC MILLIN, G.W.	COM	283 25 41	9	1
MEHALICK, J.	CMOMM	258 34 28	9	2
MITCHELL, H.E.	CMOMM	346 54 14	7	1
MORRISSEY, R.W.	MMOM1	225 25 54	4	2
MULCAHY, C.E.	SC3	667 49 55	0	1

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

<u>NAME</u>	<u>RATE</u>	<u>SERVICE NO.</u>	<u>WAR PATROLS</u>	<u>SIMULATED WAR PATROLS</u>
NABOR, E.Q.	STML	583 34 55	0	1
PAHOLSKY, R.M.	sl	791 53 70	0	1
PIAZZA, P.	CMOMM	207 12 18	10	2
RONGSTAD, L.E.	GML	329 03 96	7	1
REED, J.S. Jr.	MOMM3	582 30 98	0	2
SEITER, J.A.	sl	791 49 40	0	1
SIMONSON, J.E.	TML	300 49 61	0	1
SNELLEN, R.D.	slSC	872 64 25	2	1
STEFANIAK, G.	Fl	791 29 46	0	1
STEWART, J.H. Jr.	CCS	414 34 18	6	2
SZYMANSKI, T.	Fl	614 28 31	12	1
THOMAS, D.J.	FLEM	301 43 99	0	1
THRESHER, L.	sl	567 87 57	0	1
TURCO, R.L.	S2	387 83 30	0	1
WHITE, F.P.	MOMM3	360 71 40	0	2
WHITE, W.B.	sl	987 94 18	0	1
WILLIAMS, J.W. Jr.	TML	337 93 06	4	1
ZELLER, E.B. Jr.	MOMM2	244 22 06	5	2

DECLASSIFIED

28 November 1947:

1400 W Underway in accordance with ComSubPac Operation Order No. 28-47 dated 25 November 1947. Enroute Tsingtao, China, via Sydney, Australia, Vitiaz Strait, Yap Islands, and Okinawa.

1500 W Set clocks back one hour to \neq 11 Zone Time.

1635 X Made trim dive.

Weather reports are being made in accordance with CinCPacFlt letter 5L-47.

1902 X SS Radar contact on aircraft bearing 238° , range 44,600.

29 November 1947:

0500 X LT E. Pridonoff commenced navigating for a period of three days.

0635 X Made training dive.

0715 X Listened to Army-Navy game.

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1023 X Made training dive to 300 feet. Bathythermograph inoperative. Capillary tube ruptured.
- 1200 X Position Lat. 17°-29' N; Long. 160°-58' W.
- 1230 X Started battery charge in preparation for 24 hour endurance run. (S-11-F).
- 1400 X Held steering casualty drills.
- 2000 X Started endurance run.
- Fox Schedule Reception Exercise (No. S-22-C).
- Cryptographic Training by ENS J.R. Johnson (No. S-11-C).

30 November 1947:

- 0000 X Continuing Endurance Run.
- 0900 X Made training dive at 3 hr. rate. Held fire quarters and collision quarters.
- 1014 X Surfaced.
- 1118 X Held steering casualty drills.
- 1200 X Position Lat. 13°-05' N; Long. 164°-50' W.
- 2000 X Completed Engineering Endurance Run (S-11-E). No casualties.
- 2030 X Held movie in Forward Torpedo Room.
- Fox Schedule Reception Exercise (No. S-22-C).
- Cryptographic Training by ENS E.P. Travers (No. S-11-C).

1 December 1947:

- 0700 X Made training dive. Exercised at "hovering". Held casualty drills on bow and stern planes.
- 0900 X Lecture and quiz for 2nd & 3rd sections "Diving Operation, Use of Planes" by LTJG J.E. Bonds.

DECLASSIFIED

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1000 X Held steering casualty drills.
- 1107 X Made training dive. Chlorine drill in Forward Battery.
- 1200 X Position Lat. 08°-29' N; Long. 168°-04' W.
- 1300 X Same lecture as 0900 for 1st section.
- 1515 X Made training dive. Held fire control problem with plot in ward-room. Rigged for depth charge and silent running. Went deep.

LT E. Pridonoff completed 3 day's work in Navigation and Manipulation of Loran Equipment (No. S-76-CC). Fox Schedule Reception Exercises (No. S-22-C).

Cryptographic Training by ENS J.R. Johnson (No. S-11-C).

Fox Schedule Exercise (No. S-22-C). Manipulation of Loran Equipment (No. S-76-CC) by LT. A.W. Gillis.

2 December 1947:

LT A.W. Gillis commenced three days of Navigating.

- 0000 X Discovered cracks on liner of #1 unit #3 M.E. Effected temporary repairs.
- 0105 X Held steering casualty drills.
- 0557 X Made training dive. Will be down for 12 hours.
- 0812 X Exercised planesmen at high speed running for twenty minutes. Held casualty drills on bow and stern planes. Shifted steering to emergency and hand in conning tower and control. Exercised at hovering.
- 0900 X Lecture and quiz for 2nd & 3rd sections "Ship's Organization and Orders" by LCDR R. M. Carroll.
- 1200 X Position Lat. 05°-36' N; Long. 169°-53' W.
- 1300 X Same lecture as 0900 X for first section.
- 1305 X Performed same drills as 0812 X.
- 1705 X Performed same drills as 0812 X.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1803 X Surfaced. CO₂ present at the end of submergence was 1.2%. No CO₂ absorbent was used.

ZELLER, E.B. Jr., MOMM2, 244 22 06, complained of severe pain in abdomen. Pharmacist's Mate Jones put patient to bed under observation. Administered sulfadiazine and penicillin after a diagnosis of appendicitis by Jones.

2341 X Changed course to 187° T and standard speed on 4 M.E. heading for Canton Island. Notified ComSubPac and requested plane rendezvous at Canton Island. Present seas not suitable for plane landing.

Cryptographic Training by ENS J.R. Johnson (No. S-11-C).

Fox Schedule Exercise (No. S-22-C).

Manipulation of Loran Equipment (No. S-76-CC) by LT A.W. Gillis.

3 December 1947:

0720 X Received ComSubPac's dispatch saying that plane and Doctor would be at Canton Island; also prescribed treatment for patient.

0900 X Lecture and quiz for 2nd and 3rd section. "Hydraulic System" by LT A.W. Gillis.

1200 X Position Lat. 01°-30' N; Long. 170°-58' W.

1300 X Same lecture as 0900 for 1st section.

1600 X Contacted Army plane. Pharmacist's Mate exchanged information with Doctor Vogel over voice radio. Held frequency shift exercise (No. S-41-C).

Cryptographic Training (No. S-11-C) by ENS E.P. Travers.

Fox Schedules (No. S-22-C).

Manipulation of Loran Equipment (No. S-76-CC) by LT A.W. Gillis.

4 December 1947:

0340 X SS radar contact on plane bearing 095° T, range 35,000 yards.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0430 X Radar contact on Canton Island bearing 195° T, range 44,000 yards. Made approach to southwest side of Canton Island near entrance to small boat channel.
- 0600 X At channel entrance. A Pan American crash boat came alongside to transfer Dr. Vogel. After patient was examined, he was transferred to the crash boat to be taken ashore. Greased topside while lying to.
- 0658 X Set course 228° T for Sydney. Received ComSubPac's dispatch giving us permission to by-pass Funafuti Island because of our delay.
- 0900 X Lecture and quiz for 2nd and 3rd sections "3000# and 600# Air Systems" by ENS J. R. Johnson.
- 1034 X Made training dive. Held steering & plane casualty drills.
- 1109 X Held controller drill for electrician strikers and unqualified officers. Maneuvering Exercise No. S-13-E.
- 1200 X Position Lat. $03^{\circ}-23'$ S; Long. $172^{\circ}-18'$ W.
- 1300 X Lecture for 1st section. Same as 0900.
- 1400 X Performed Exercise No. S-12-E. Ahead standard to back full, to ahead flank.
- 1530 X Set clocks back 1 hour to \neq 12 Zone Time.
- 1532 Y Made training dive. Held drill in shifting planes to Emergency and Hand. Held collision drill.
- Cryptographic Training (No. S-11-C) by ENS J. R. Johnson.
- Fox Schedule Reception (No. S-22-C).
- Manipulation of Loran Equipment (No. S-76-CC) by LT A.W. Gillis.
- 2121 Radar contact on Gardner Island bearing 318° T, range 51,000 yards.
- 2325 Set course 235° T.
- LT A.W. Gillis completed three days of Navigating.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

5 December 1947:

LTJG H. J. Trueblood commenced navigating.

- 0710 Y Held steering casualty drills.
- 0900 Y Lecture and quiz on "225# & 10# Air System" for 2nd & 3rd sections by ENS E. P. Travers.
- 1030 Y Held steering casualty drills.
- 1045 Y Made training dive to 230 feet. Chlorine in both battery compartments. Lost all power. Hovering by blowing. Went to 120 feet to determine what depth negative tank flood valve would open. (Pressure in negative zero). Planed up slowly. Negative flood opened at 80 feet.
- 1200 Y Position Lat. $07^{\circ}-04'$ S; Long $177^{\circ}-09'$ W.
- 1300 Y Lecture and quiz for first section same as 0900 Y.
- 1412 Y Made training dive. Held plane casualty drills.
- Cryptographic training (No. S-11-C) by LT E. Pridonoff.
- Fox Schedule Reception (No. S-22-C).
- Manipulation of Loran Equipment (No. S-76-CC) by LTJG H. J. Trueblood.
- 2400 Y Crossed 180th Meridian. Entered Golden Dragon Area. Set clocks ahead 24 hours to conform with -12 Zone Time, eliminating 6 December.

7 December 1947:

- 0430 M Radar contact on Nukulaelae Island bearing 158° T, range 24,500 yards.
- 0625 M Made training dive. Exercised planesmen in shifting to Hand and Emergency.
- 1057 M Made training dive. Upon surfacing, as we reached 45', sounded diving alarm, simulating sighting of plane.
- 1200 M Position Lat. $10^{\circ}-19'$ S; Long. $178^{\circ}-38'$ E.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1420 M Had two man overboard drills by LT E. Pridenoff and LTJG J.E. Bonds.
- 1534 M Made training dive to 300 feet.
- 1648 M Performed Exercise No. S-12-E, Ahead Standard to Back Full to Ahead Flank. Making 18 knots, ship dead in the water in 62 seconds.
- 1658 M Held maneuvering exercise No. S-13-E for one-half hour.
- 2112 M Radar contact on Rotuma Island, bearing 199° T, distant 42 miles.
Cryptographic training by LT A.W. Gillis (No. S-11-C).
Fox Schedule Reception (No. S-22-C).

8 December 1947:

- 0030 M C/c to 210° with Rotuma Island abeam to port 15 miles.
- 0251 M Held steering casualty drills.
- 0530 M Submerged for 12 hour dive. Held depth control, hovering, as steering and plane casualty drills for twenty minute period each watch.
- 0900 M Lecture and quiz for 2nd and 3rd sections "Escape Procedure; Use of Lungs and R.B.A." by LTJG H. J. Trueblood.
- 1200 M Position Lat. $13^{\circ}-50'$ S; Long. $175^{\circ}-49'$ E.
- 1300 M Lecture for first section same as 0900 M.
- 1731 M Surfaced.
Cryptograph training (No. S-11-C) by LTJG J. E. Bonds.
Fox Schedule Reception (No. S-22-C).
LTJG H. J. Trueblood completed 3 days of navigating.

9 December 1947:

LTJG J. E. Bonds commenced navigating.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0657 M Made training dive. At 30' sounded surface alarm simulating casualty on hatch. Sounded diving alarm and continued dive. Held drills on planes.
- 0900 M Lecture and quiz for 2nd and 3rd section "Fresh Water - Sanitary and Plumbing System" by LT A. W. Gillis.
- 1050 M Made training dive. Held drill in opening and shutting M.B.T. vents by hand.
- 1144 M Exercised controllermen at Exercise No. S-12-E twice; ahead standard to back full to ahead flank.
- 1200 M Position Lat. 17°-19' S; Long. 173°-44' E.
- 1300 M Lecture and quiz for 1st section same as 0900.
- 1515 M Made training dive.
- 1700 M Set clocks back one hour to -11 Zone Time.
- 1720 L Exercised controllermen and unqualified officers at Maneuvering Exercise No. S-13-E for one-half hour.
- Cryptographic training No. S-11-C by LTJG H. J. Truesblood.
- Fox Schedule Reception No. S-22-C.

10 December 1947:

- 0647 L Made training dive. Exercised planesmen at high speed running and shifting planes to emergency and hand.
- 0900 L Lecture and quiz for 2nd and 3rd sections. "Trim and Drain System" by LT E. Pridonoff.
- 1000 L Sighted Mathew Island bearing 173° T, distant 36 miles.
- 1043 L Made training dive. Operated vent by hand.
- 1200 L Position Lat. 21°-51' S; Long 171°-14' E.
- 1300 L Lecture and quiz for 1st section. Same as 0900.
- 1343 L Mathew Island abeam to port, 19 miles.
- 1515 L Made training dive.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Cryptographic training No. S-11-C by ENS E. P. Travers.

Fox Schedule Reception No. S-22-C.

1600 L Discovered crack on liner of #9 unit #1 M.E. Effected temporary repairs.

11 December 1947:

0529 L Made training dive, to be submerged for 12 hours.

0612 L Exercised planesmen at high speed running, depth changes, shifting planes to hand and emergency.

0900 L Lecture and quiz for 2nd and 3rd section "Ship and Battery Ventilation Systems" by ENS E. P. Travers.

0920 L Stopped and hovered for one hour and 20 minutes.

1000 L Same as 0612 L.

1200 L Position Lat. $24^{\circ}-16'$ S; Long. $168^{\circ}-12'$ E.

1300 L Lecture for 1st section. Same as 0900 L.

1315 L Stopped and hovered for 15 minutes.

1447 L Exercising planesmen. Same as 0612 L.

1729 L Surfaced. CO_2 percentage 1.7. No CO_2 absorbent was used.

LTJG J. E. Bonds completed 3 days of Navigating.

Cryptographic training No. S-11-C by ENS E. P. Travers.

Fox Schedule Reception No. S-22-C.

12 December 1947:

ENS J. R. Johnson commenced Navigating.

0635 L Made training dive.

0830 L Lecture and quiz for 2nd and 3rd sections. "Fuel Oil and Compensating Water System" by ENS J. R. Johnson.

1050 L Made training dive.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1200 L Position Lat. 26°-25' S; Long. 164°-17' E.
- 1300 L Lecture and quiz for 1st section. Same as 0630.
- 1431 L Held collision drill. (Fwd. Batt.)
- 1435 L Held fire drill (F.T.R.)
- 1510 L Held steering casualty drills.
- 1525 L Made training dive. Lost propulsion. Commenced hovering. Entered cubicle and found a small piece of cork between contactors. No damage.
- 1610 L FIRE IN C.T. An electric cable was smoking. Turned off power. This was an extra lead to Bendix log which had not been removed during the yard overhaul.
- Cryptographic Training No. S-11-C by ENS E. P. Travers.
- Fox Schedule Reception No. S-22-C.
- 1850 L Held steering casualty drills.
- 1900 L Discovered leak on fresh water salt water cooler of #1 main engine. Pulled cooler and silver soldered leak. Tested to 150# and reinstalled. Engine out of commission 1 day and 7 hours.

13 December 1947:

- 0637 L Made training dive. Exercised planesmen in shifting planes to hand and emergency.
- 0800 L Field day in preparation for arrival in Sydney.
- 1200 L Position Lat. 28°-42' S; Long. 159°-16' E.
- 1459 L Held steering casualty drills.
- 1539 L Made training dive.

Cryptographic training No. S-11-C by LT E. Pridonoff.

Fox Schedule Reception No. S-22-C.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

14 December 1947:

- 0657 L Made training dive.
- 0700 L Received instructions from FOIC Sydney for entry.
- 0800 L Continuing field day.
- 1200 L Position Lat. $31^{\circ}-34'$ S; Long. $154^{\circ}-51'$ E.
- 1251 L Made training dive.
- 1630 L Inspection of the ship after two day's of intensive cleaning revealed the ship to be in first class shape.
- 2005 L Radar contact on Australia bearing 283° T, distant 103,000 yards.
- 2010 L SS Radar contact on ship, bearing 334° T, range 55,000 yards. Radar tracking party manned. Ship's course was 222° T, speed 12 knots.

15 December 1947:

The sky is overcast and visibility is 6000 yards. No stars were obtained this morning and with the southerly currents in the vicinity, anticipate being south of Sydney Harbor entrance.

- 0224 L SS Radar contact on ship, bearing 152° T, range 46,400 yards.
- 0458 L SS Radar contact on ship bearing 220° T, range 18,000 yards.
- 0611 L SS Radar contact on ship bearing 302° T, range 23,000 yards.
- 0815 L Made landfall on Botany Bay, 8 miles south of Sydney Harbor entrance. Set course for harbor entrance.
- 0820 L Set clocks back one hour to conform with -10 Zone Time.
- 0840 K Pilot A.V. Harcourt embarked.
- 0916 K Anchored in Sydney Harbor for inspection by Medical Authorities. Condition found to be satisfactory and Certificate of Practique was given.
- 0920 K Proceeding to berth 4 Circular Quay. This was an excellent berth located two blocks from the city.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1000 K Moored to Berth 4 Circular Quay. During our stay in Sydney called on the Consul, who in turn called with me on Rear Admiral Moore, RAN, and Rear Admiral Farncomb, RAN. The former is in charge of the shore establishments and the latter is SOPA.

Visiting hours were from 1300 to 1600 every day during our stay there and a capacity crowd was present each day, despite the fact that it rained almost continually.

We were feted and dined continuously. All hands considered Sydney an excellent liberty port.

The conduct of the men ashore was excellent.

Our own radio watch was maintained during stay in Sydney.

19 December 1947:

0835 K Pilot F.C. Drewett embarked. Proceeded to Berry's Bay Oil Wharf to fuel. Fuel was received from the Commonwealth Oil Refinery. 45,527 gallons were received. Pilot disembarked.

1550 K Pilot C.P. Nichols embarked. Proceeded to entrance of Sydney Harbor.

1653 K Pilot disembarked.

1705 K Hornby Light abeam to starboard 800 yards. Took departure and set course for Yap Island, via Vitiaz Straits.

ENS E. P. Travers commenced Navigating.

20 December 1947:

0230 K Sighted Sugarloaf Pt. light bearing 310° T, distant 23 miles. Have been experiencing a 3 knot southerly current.

1046 K Made trim and training dive. Manned battle stations.

1200 K Position Lat. $31^{\circ}-04'$ S; Long. $153^{\circ}-41'$ E.

1500 K Wind increased to a velocity of 30 knots. Seas are from ahead and ship's speed had been reduced to 10 knots through the water.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Cryptographic Training No. S-11-C by ENS E. P. Travers.

Fox Schedule Reception No. S-22-C.

21 December 1947:

1200 K Position Lat. $27^{\circ}-07'$ S; Long. $155^{\circ}-11'$ E.

1414 K Made training dive. Exercised crew at Battle Stations Torpedo and fire control problem. Went deep, rigged for depth charge and silent running.

2018 K SS radar contact on ship bearing 352° T, 41,200 yards. Manned radar tracking party and tracked ship on course 200° T, speed 10 knots.

Cryptographic training No. S-11-C by ENS J. R. Johnson.

Fox Schedule Reception No. S-22-C.

22 December 1947:

0930 K Lecture and quiz for 1st and 2nd section on "Main Power, Lighting and Auxiliary Equipment" by LTJG J. E. Bonds.

1046 K Made training dive. Exercised crew at chlorine and fire quarters.

1200 K Position Lat. $21^{\circ}-59'$ S; Long. $156^{\circ}-26'$ E.

1300 K Lecture and quiz for 3rd section. Same as 0930 K.

1448 K Made training dive simulating diving away from plane contact. Exercised crew at Battle Stations Torpedo with fire control problem on multiple targets. Rigged for depth charge and silent running.

1541 K Exercised controllermen at Maneuvering Exercise No. S-13-E for 1/2 hour.

1916 K SS Radar contact on ship bearing 038° T, range 25,000 yards. Tracked on course 195° T, speed 11 knots.

Cryptographic training No. S-11-C by ENS E. P. Travers.

Fox Schedule Reception No. S-22-C.

ENS E. P. Travers completed 3 days of Navigating.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

23 December 1947

LT E. Pridenoff commenced Navigating.

- 0653 K Made training dive. Shifted planes to hand and emergency.
- 0909 K Held steering casualty drills.
- 0930 K Lecture and quiz for second and third sections on "Forward Torpedo Room" by Williams, J.W., TML.
- 1059 K Made training dive.
- 1200 K Position Lat. 16° -34' S; Long. 156° -38' E.
- 1230 K Held visual semaphore test No. 9-71-C for all quartermasters and signalmen.
- 1300 K Lecture, same as 0930, for 1st section.
- 1516 K Made training dive. Held collision quarters.
- 1540 K Held Maneuvering Exercise No. 9-13-E for one-half hour.

24 December 1947

- 0707 K Made training dive. Practiced hovering.
- 0930 K Lecture and quiz for 2nd and 3rd sections "Forward Battery Compartment" by Ensign E. Travers.
- 1200 K Position Lat. 11° -08' S; Long. 156° -39' E.
- 1215 K Passed through numerous oil slicks.
- 1300 K Lecture and quiz for 1st section. Same as 0930.
- 1425 K Made training dive. Exercised crew at Battle Stations Torpedo. Held fire control problem. Held Battle Surface.
- 1700 K The Razorback Choir under the direction of Maestro Gillis entertained the crew with Christmas Carols over station LMC.
- 1955 K SS Radar contact on ship bearing 132° T, distant 46.7 miles.
- 2207 K SS Radar contact on ship bearing 132° T, distant 70 miles. In this area we have been obtaining phenomenal ranges on ships.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 2300 K Received Christmas Greetings from Rear Admiral McCann.
Fox Schedule Reception No. S-22-C.
Cryptographic training No. S-11-C by LT E. Pridonoff.

25 December 1947

CHRISTMAS DAY -- Holiday Routine.

- 0930 K SS Radar contact on Woodlark Island bearing 238° T, distant 34.8 miles.
1200 K Position Lat. $08^{\circ}-30'$ S; Long. $152^{\circ}-47'$ E.
1700 K All hands gathered around Christmas tree in Crew's Mess to distribute presents to crew.
Fox Schedule Reception No. S-22-C.
Cryptographic training No. S-11-C, by LTJG Trueblood.
LT E. Pridonoff completed three days of Navigating.

26 December 1947

LT A.W. Gillis commenced Navigating.

- 0250 K SS Radar contact on New Britain Island bearing 000° T, distant 50.8 miles.
0635 K Made training dive. Exercised planesmen at shifting to hand and emergency.
0810 K Lifted upper crankshaft of #3 main engine prior to installing new cylinder liner.
0927 K Held steering casualty drills.
0930 K Lecture and quiz for 2nd and 3rd sections "Control Room" by Mehalick, CMOMM.
1115 K Lowered upper crankshaft of #3 main engine.
1200 K Position Lat. $06^{\circ}-16'$ S; Long. $148^{\circ}-15'$ E.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1230 K Held Visual Operators Flashing Light Test No. 9-72-C for quartermasters and signalmen.
- 1420 K Sighted four sampans. Avoided.
- 1509 K Made training dive.
- 1718 K C/c to 345° T passing through Vitiaz Straits.
- 1802 K SS Radar contact on ship bearing 220° T, range 50,000 yards.
- 2339 K Set course 312° T for Yap Island.
- Fox Schedule Reception No. 9-22-C.
- Cryptographic training by LTJG J. E. Bonds.

27 December 1947

- 0645 K Made training dive. Held plane casualty drills.
- 0934 K Sighted empty oil drum. Manned 40 MM and 50 Cal. machine guns. Closed to 1000 yards. The forward 40 MM gun sunk the drum. Expended 60 rounds of 40 MM and 500 rounds of .50 Cal.
- 1102 K Made training dive. Exercised planesmen at high speed running.
- 1200 K Position Lat. 02°-40' S; Long. 145°-22' E.
- 1230 K Held field day for 4 hours.
- 1300 K Held instruction for 6 men in the use of the .45 cal. automatic pistol.
- 1955 K Davey Jones came aboard and welcomed us to King Neptunus Rex's kingdom. The Pollywogs are getting a workout at this point.
- Fox Schedule Reception No. 9-22-C.
- Cryptographic training No. 9-11-C by ENS J.R. Johnson.

28 December 1947

- 0648 K Made training dive.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

0900 K King Neptune and Royal Party came aboard. Hoisted the Jolly Roger. All Pollywogs were duly initiated.

1200 K Position Lat. $00^{\circ}-15'$ N; Long. $142^{\circ}-39'$ E.

1530 K Made training dive.

2110 K Made night training dive for indoctrination.

Fox Schedule Reception No. S-22-C.

Cryptographic training No. S-11-C by Ensign E. Travers.

LT A.W. Gillis completed three days of Navigation.

29 December 1947

LTJG H.J. Trueblood started Navigating.

0655 K Made training dive.

0930 K Lecture and quiz for 2nd and 3rd sections "Pump Room and Conning Tower" by ENS E. Travers.

1100 K Made training dive. Exercised planesmen at depth control.

1200 K Position Lat. $04^{\circ}-11'$ N; Long. $140^{\circ}-42'$ E.

1230 K Held Visual Semaphore Test No. S-71-C for all quartermasters and signalmen.

1300 K Lecture and quiz for 1st section. Same as 0930.

1400 K Held instructions and firing of .45 Calibre pistol for 6 men.

1500 K Held seven man overboard drills, one for each officer.

Fox Schedule Reception No. S-22-C.

Cryptographic Training No. S-11-C by LT E. Pridenoff.

30 December 1947

0705 K Made training dive.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0930 K Lecture and quiz for 2nd and 3rd sections "After Battery Compartment" by LT A.W. Gillis.
- 1000 K Instruction on safety precautions and firing of .45 calibre pistol for 6 men.
- 1034 K Made training dive. Exercised crew at fire, chlorine and collision quarters.
- 1200 K Position Lat. $08^{\circ}-35'$ N; Long. $138^{\circ}-57'$ E.
- 1230 K Held steering casualty drills.
- 1300 K Lecture and quiz for 1st section. Same as 0930.
- 1437 K SV radar contact on Yap Island bearing 332° T distant 34.1 miles.
- 1446 K Made training dive. Exercised crew at Battle Station Torpedo and fire control problem.
- 1658 K Sighted Yap Island bearing 306° T distant 22 miles.
- 2052 K Approached the beach to take soundings where we would submerge tomorrow for photographic reconnaissance. Made first run at 3500 yards and the second run at 2500 yards. In addition to soundings, ranges to the reef were taken to check the contour of the reef as laid out on the chart. The sea was state two with many white caps. The SS radar PPI portrayed quite a bit of sea return, but the water over the reef was calm. A clear picture of the reef was thereby obtained because the entire PPI was shaded with the exception of the reef. The contour of the reef was checked with that of the chart and found to be correct. The width of the reef was also measured by radar and this also proved to coincide with the chart. The reason this is being commented upon is due to the fact that the chart states that the reef was plotted from aerial pictures and is perhaps not too accurate. After this had been completed retired to east of Island to await the dawn for photographic reconnaissance.

31 December 1947

- 0545 K Commenced approach to point of submergence.
- 0622 K Submerged 6000 yards from shoreline, 45 minutes prior to sunrise.
- 0725 K C/c to 051° T, parallel to coast line. Sky is totally overcast. Continued on run taking soundings to determine set and drift of current if any.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0825 K Reversed course to reach starting point. Current is negligible.
- 0930 K Lecture and quiz for 2nd 3rd sections "Forward and After Engine Rooms" by GMOMM Piazza.
- 0935 K Set course 051° T. Sky was still overcast and with no hope for better conditions started to take pictures.
- 1103 K C/c to 016° T for second leg of shoreline.
- 1137 K Surfaced. The light condition had changed for the worse so abandoned the idea of further pictures. Set course for Okinawa on 332° T.
- 1200 K Position. 5 miles Northeast of Yap Island.
- 1300 K Lecture and quiz for 1st section. Same as 0930.
- 1600 K Set clocks back one hour to conform with -9 Zone time.
- LTJG H.J. Trueblood completed 3 days of Navigating.

1 January 1948

HAPPY NEW YEAR.

LTJG J. E. Bonds commenced Navigating.

- 0930 I Lecture and quiz for 2nd and 3rd sections "Maneuvering Room" by CEM Hayes.
- 1200 I Position Lat. $14^{\circ}-02'$ N; Long. $135^{\circ}-35'$ E.
- 1300 I Lecture and quiz for 1st section. Same as 0930.
- 1605 I Made training dive.
- 1700 I The seas are picking up and the bridge is very wet.
- Cryptographic training No. S-11-C by LTJG J.E. Bonds.
- Fox Schedule Reception No. S-22-C.
- Manipulation of Loran Equipment No. S-76-CC by Navigator and LTJG J.E. Bonds.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

2 January 1948

Seas are state seven with a 30 kts. wind from the North North East. A speed of eight knots over the ground is being made on two main engines.

1200 I Position Lat. $17^{\circ}-45'$ N; Long. $133^{\circ}-25'$ E.

2135 I Reduced speed to one main engine as we began to take water down the Conning Tower.

Cryptographic training No. S-11-C. ENS Travers.

Fox Schedule No. S-22-C.

Loran Equipment No. S-76-CC. Navigator and LTJG J.E. Bonds.

3 January 1948

Weather and sea conditions remain unchanged.

1200 I Position Lat. $20^{\circ}-35'$ N; Long. $131^{\circ}-38'$ E.

1300 I Sent despatches to CTG 71.2 and MRC Guam notifying them of our revised ETA at Okinawa.

Cryptographic training No. S-11-C. LT Pridonoff.

Fox Schedule No. S-22-C.

Loran Equipment No. S-76-CC. LTJG Bonds.

LTJG J.E. Bonds completed 3 days of Navigating.

4 January 1948

Ensign J.R. Johnson commenced Navigating.

The sea conditions have changed allittle for the best.

1200 I Position Lat. $23^{\circ}-25'$ N; Long. $129^{\circ}-30'$ E.

1354 I Made training dive.

2000 I Sent despatches to CTG 71.2 and MRC Guam notifying them of our revised ETA entrant to Buckner Bay.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Cryptographic Training No. S-11-G. LTJG Trueblood.

Fox Schedule No. S-22-G.

Loran Equipment No. S-76-GC. ENS Johnson.

5 January 1948

- 0318 I SS radar contact on Okinawa bearing 318° T distant 40.1 miles.
- 0715 I Entered Buckner Bay.
- 0852 I Anchored in Buckner Bay. Called on CTG 75.3, Captain G.L. Huff, who is SOPA and Commander Destroyer Division 132, Captain B.A. Fuetsch.
- 1104 I Underway to fueling deck. Fueled to capacity. Received 64,000 gals. Started work on superstructure which shows wear and tear after 35 days at sea.
- 1200 I Position: Buckner Bay, Okinawa.
- 1430 I Conference was held on the U.S.S. FLOYDS BAY, AVP40, of all persons connected with ASW operations starting tomorrow and for the rest of the week.

6 January 1948

- 0630 I Underway in accordance with CTG 75 operation order No. 7-47 dated 30 December 1947 for operating area to conduct ASW exercises with planes.
- 0900 I On station. Started Y-84-AW.
- 1200 I Completed exercise.
- 1200 I Position: 30 miles Southeast of Buckner Bay Entrance.
- 1300 I Commenced Y-84-AW.
- 1600 I Completed exercise.
- Stayed underway overnight for early start on 7 January.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

7 January 1948

0750 I Circling on station awaiting planes.
0800 I Commenced Y-84-AW with 2 PB4Y.
1100 I Completed exercise.
1200 I Position Lat. 25°-36' N; Long. 228°-00' E.
1200 I Set course 340° T for Buckner Bay.
1356 I Anchored in Buckner Bay.

8 January 1948

0630 I Underway for operating area.
0900 I Commenced Jeing Day Aircraft-Surface Ship attack Y-90-AW.
1200 I Position Lat. 25°-44' N; Long. 128°-10' E.
1343 I Completed exercise and surfaced. Commenced search for Sene-buoys.
1559 I Recovered one Sene-buoy.
1605 I Recovered second Sene-buoy.
1751 I Ceased search for buoys and proceeded to area for Y-91-AW.
2330 I On station, circling.

9 January 1948

0000 I Commenced Y-91-AW.
0140 I Exercise cancelled because of airplane's radar going out of commission.
0145 I Set course for operating area for morning exercise.
0747 I Commenced Y-84-AW.
1100 I Completed Y-84-AW.
1200 I Position: 15 miles Southeast of Buckner Bay entrance.
1406 I Anchored in Buckner Bay.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

10 January 1948

- 0930 I Attended critique on U.S.S. FLOYDS BAY.
- 1200 I Position. Buckner Bay.
- 1300 I Went ashore with recreation party for Big Game (softball). Officers Vs. Crew. Crew defeated officer 9-8.
- 1723 I Underway for Tsingtao. Set course 034° T.
- 2040 I SS radar contact on YORON JIMA Island bearing 005° T distant 24 miles.
- 2136 I C/c to 317° T to pass between Northern end of Okinawa and YORON Island.
- 2248 I Set course 338° T.

11 January 1948

- 0035 I SS radar contact on TORI SHIMA bearing 005° T distant 32.8 miles.
- 0245 I TORI SHIMA abeam to starboard distant 15 miles.
- 1200 I Position Lat. $29^{\circ}-44'$ N; Long. $127^{\circ}-10'$ E.
- 1345 I Made training dive.
- 1600 I Set clocks back one hour to conform with -8 Zone time.
- 1516 H Sighted two fishing vessels bearing 286° T distant 16,000 yards.
- 1525 H Sighted two fishing vessels bearing 346° T distant 20,000 yards.

12 January 1948

- 0215 H SS radar contact on MARATO ISLAND bearing 040° T distant 38 miles.
- 0540 H Sighted many fishing vessels during the day; impossible to avoid them all.
- 1018 H Made training dive.
- 1200 H Position Lat. $33^{\circ}-54'$ N; Long. $128^{\circ}-53'$ E.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

13 January 1948

- 0454 H Set course 000° T with Ling Shan Island bearing 285° T and CHALIEN TAO Island bearing 355° T.
- 0708 H Made trim and training dive.
- 0825 H Rendezvous with U.S.S. CHARLES P. CECIL (DD835) and received copy of week's operations.
- 1028 H Commenced Y-41-AW with U.S.S. C.P. CECIL.
- 1200 H Position Lat. 35°-35' N; Long. 120°-55' E.
- 1226 H Completed Exercise Y-41-AW.
- 1300 H Commenced Y-52-AW with U.S.S. C.P. CECIL (DD835).
- 1610 H Completed Y-52-AW.
- 1615 H Set course for anchorage. In two hours the wind had increased to 40 knots and the sea was a bit on the rough side.
- 1915 H Arrived at anchorage; to lee of CHALIEN TAO Island but decided to stay underway because of the weather. It was now snowing and the temperature 37° F. Started taking precautions against freezing weather; running all engines, drained auxiliary engine, condensers and piping of air conditioning plant. During the night the temperature dropped to 26° F.

14 January 1948

Underway keeping position on CHALIEN TAO light and Island. Unable to anchor because of heavy weather.

- 0624 H Underway for operating area.
- 0748 H In area. U.S.S. BEGOR not among those present.
- 1200 H Position Lat. 35°-35' N; Long. 120°-53' E.
- 1400 H Could not raise the U.S.S. BEGOR so proceeded to vicinity of CHALIEN TAO Island.
- 1600 H Received despatch saying operations with U.S.S. BEGOR cancelled.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1734 H Anchored in lee of Chalien Tao Island with lighthouse bearing 304° T, range 1500 yards.

15 January 1948

- 0632 H Underway for Operating Area with U.S.S. NEWMAN K. PERRY (DD883) and U.S.S. CHARLES P. CECIL (DD835).
- 0905 H Commenced Y-52-AW.
- 1048 H Completed exercise.
- 1200 H Position Lat. $35^{\circ}-36'$ N; Long. $120^{\circ}-53'$ E.
- 1230 H Due to the heavy weather the OCE cancelled further exercises and all proceeded to Tsingtao. The temperature was 20° F and the weather in general very unpleasant.
- 1738 H Moored port side to Pier #3, outboard of U.S.S. FLORIKAN, Inner Harbor, Tsingtao, China. The periscope shears, bridge and guns were covered with ice an inch thick. We were a moving icebox.

16-18 January 1948

Moored at Pier 3, alongside U.S.S. FLORIKAN, Tsingtao, China.

Commanding Officer called on Commodore Kelihier, Commander Service Squadron THREE; Captain P.E. McDowell, U.S. Navy, Commander Training Group; and Captain R.A. Hibbs, Commander U.S. Naval Port Facilities, Tsingtao.

The Officers and Crew of the U.S.S. FLORIKAN have been most cooperative and helpful. They have gone out of their way many times to help us along. It is most gratifying to arrive in a foreign port and have some one present ask you in what way they can be of assistance.

The FLORIKAN conducted an inspection of all salvage equipment.

19 January 1948

- 0656 H Underway for Operating Area. Exercised at radar tracking (Exercise S-26-CC) enroute Area.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1028 H On station. Received instructions from U.S.S. NORRIS (DD859).
1055 H Commenced Y-52-AW.
1147 H Completed exercise.
1200 H Position Lat. 35° -34' N; Long. 120° -51' E.
1208 H Commenced Y-41-AW.
1412 H Completed exercise. The U.S.S. NORRIS returned to Port.
1425 H Conducted Maneuvering Exercise S-13-E for one half hour.
1518 H Exercised crew at emergency drills.
1528 H Held five man overboard drills.
1625 H Secured from drills. Set course for anchorage at Chalien Tao.
1711 H Anchored.

During the Maneuvering Exercise the starboard starting lever mechanical interlock latch shaft broke. Took latch shaft from #4 main generator. After anchoring the Auxiliaryman turned one out on the lathe.

20 January 1948

0651 H Underway for Operating Area.
0838 H Commenced Y-30-AW with U.S.S. PERRY (DD883).
1117 H Completed exercise.
1200 H Position Lat. 35° -33' N; Long. 121° -04' E.
1258 H Commenced Y-30-AW with U.S.S. PERRY.
1452 H Completed exercise.
1511 H Commenced approach on DD (S-1-G). LCDR R.M. Carroll A.O.
1533 H Completed approach.
1550 H Commenced approach on DD (S-1-G). LCDR R.M. Carroll A.O.
1615 H Completed approach.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1828 H Set course for anchorage, 002° T.

1732 H Anchored with Chalien Tao light bearing 348° T, range 1900 yards.

21 January 1948

0653 H Underway for Operating Area.

0816 H Commenced Y-41-AW with U.S.S. PERRY (DD883).

1050 H Completed exercise.

1105 H Held communication procedure drill.

1200 H Position Lat. 35°-38' N; Long. 121°-01' E.

1329 H Commenced Y-40-AW with U.S.S. NORRIS (DD861).

1430 H Completed exercise.

1435 H Commenced Y-41-AW.

1530 H Completed exercise.

1540 H Commenced Y-52-AW.

1653 H Completed exercise. Surfaced and set course for anchorage.

1821 H Anchored with Chalien Tao light bearing 325° T, range 1900 yards.

A case of measles was suspected so asked the Doctor from U.S.S. PLATTE, anchored nearby, to confirm diagnosis. After doctor's examination evacuated after torpedo room to isolate patient till arrival Tsingtao tomorrow.

22 January 1948

0556 H Underway for Operating Area.

Wind increased from 10 to 25 knots and the sea condition was state four.

0730 H In area awaiting arrival of U.S.S. HARWOOD (DD861).

0815 H Commenced Y-40-AW.

0915 H Completed exercise and started Y-41-AW.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1142 H Completed exercise and surfaced. Seas were now state 6 and the wind 30 knots. Set course for Tsingtao as we wanted to arrive prior darkness to evacuate mease case.
- 1200 H Position Lat. $35^{\circ}-42'$ N; Long. $120^{\circ}-51'$ E.
- 1745 H Moored starboard side to U.S.S. CHICKASAW (ATF83) Pier #3, Tsingtao, China. Transferred patient to U.S.S. REPOSE (AH-16).

23-25 January 1948

Moored starboard side to U.S.S. CHICKASAW (ATF83) alongside Pier #3, Tsingtao, China. Attended conference for weekly operations' discussion on U.S.S. KERMIT ROOSEVELT, Friday, 23rd.

Attended conference Saturday noon on forthcoming Task Force exercise in February. Rear Admiral Carlson, CTG 71, SOPA.

The weather during the past several days has been very disagreeable. Winds up to 35 knots have been experienced with the temperature reaching a low of 13° F.

26 January 1948

- 0700 H Underway for operating area.
- 0837 H Set course 108° T.
- 1030 H In area. Having difficulty with WFA driver.
- 1200 H Position Lat. $35^{\circ}-36'$ N; Long. $120^{\circ}-49'$ E.
- 1302 H Commenced approach on U.S.S. MC CAFFERY (DD860) (S-1-G). LT A.W. Gillis A.O.
- 1359 H Completed approach.
- 1421 H Commenced approach (S-1-G) LT A.W. Gillis A.O.
- 1513 H Completed approach.
- 1515 H Commenced Y-41-AW.
- 1551 H Completed exercise.
- 1610 H Set course for anchorage 085° T.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1832 H Anchored with Chalien Tao light bearing 357° T, range 1800 yards.

27 January 1948

0647 H Underway for operating area with U.S.S. CECIL (DD835).

0821 H In Area. Commenced Y-41-AW.

1010 H Completed exercise.

1012 H Commenced Y-52-AW.

1118 H Completed exercise.

1200 H Position Lat. $35^{\circ}-30'$ N; Long. $121^{\circ}-00'$ E.

1201 H Commenced Y-52-AW.

1222 H Completed exercise.

1303 H Commenced Y-41-AW.

1546 H Completed exercise.

1630 H Set course for anchorage 080° T.

1725 H Anchored off Chalien Tao.

28 January 1948

0642 H Underway for Operating Area.

0808 H Commenced Y-40-AW with U.S.S. MC CARFERY (DD860).

0900 H Completed exercise.

0917 H Commenced Y-41-AW.

1136 H Completed exercise.

1200 H Position Lat. $35^{\circ}-36'$ N; Long. $120^{\circ}-50'$ E.

1300 H Commenced Y-52-AW.

1339 H Completed exercise.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL.

1346 H Commenced Y-52-AW.
1446 H Completed exercise.
1500 H Commenced approach (S-1-G). ENS J.R. Johnson A.O.
1537 H Completed approach.
1554 H Commenced approach (S-1-G). ENS J.R. Johnson A.O.
1628 H Completed approach and set course for anchorage.

29 January 1948

0647 H Underway for Operating Area in company with U.S.S. FLORIKAN.
0811 H In Area. Commenced practice approaches (S-1-G) with U.S.S. FLORIKAN as target. ENS E.P. Travers A.O.
0914 H Made second approach (S-1-G). ENS E.P. Travers A.O.
1000 H Made third approach (S-1-G). LT E. Pridonoff A.O.
1045 H Made fourth approach (S-1-G). LT E. Pridonoff A.O.
1153 H Made fifth approach (S-1-G). LTJG J.E. Bonds A.O.
1200 H Position Lat. 35°-42' N; Long. 120°-50' E.
1235 H Made sixth approach (S-1-G). LTJG J.E. Bonds A.O.
1335 H Set course for Tsingtao 090° T.
1800 H Moored port side to U.S.S. FLORIKAN at Pier 3, Tsingtao, China.

30-31 January 1948

Moored portside to U.S.S. FLORIKAN, Pier #3, Tsingtao, China. Attended conference Friday morning for discussion of last week's exercise and forthcoming week.

1 February 1948

Moored portside to U.S.S. FLORIKAN, Pier #3, Tsingtao, China.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1100 H Held conference with C.O., U.S.S. FLORIKAN concerning drills and exercises enroute Okinawa. Made a list of exercises and sent copy to FLORIKAN.
- 1515 H Underway for Outer Harbor Anchorage to oppose Sortie tomorrow.
- 1620 H Anchored in Outer Harbor.

2 February 1948

- 0625 H Underway.
- 0826 H Submerged; conducting patrol.
- 0912 H Sighted masts of three DD's bearing 310° T, range 15,000.
- 0945 H Penetrated screen (I thought). All DD's on either quarter. Obtained setup on Transport BAYFIELD.
- 0950 H Observed U.S.S. PERRY with zero angle on the bow, range 900 yards. With 90 feet of water commenced evasive tactics running at 80-85 feet. No attack was made on transport. Surfaced and proceeded to Area for ASW exercises.
- 1200 H Position Lat. $35^{\circ}-45'$ N; Long. $120^{\circ}-51'$ E.
- 1235 H Commenced Y-40-AW with U.S.S. PERRY (DD883).
- 1353 H Completed exercise.
- 1412 H Commenced Y-41-AW.
- 1532 H Completed exercise.
- 1537 H Commenced Y-52-AW.
- 1640 H Completed exercise. Set course for anchorage.
- 1803 H Anchored off Chalien Tao.

3 February 1948

- 0638 H Underway for Operating Area.
- 0818 H In Area. Commenced Y-41-AW with U.S.S. TURNER (DD834).

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

0955 H Completed exercise.
1025 H Commenced Y-52-AW.
1108 H Completed exercise.
1120 H Commenced Y-52-AW.
1200 H Position Lat. 35°-34' N; Long. 120°-51' E.
1214 H Completed exercise.
1305 H Commenced Y-52-AW.
1402 H Completed exercise.
1408 H Commenced Y-52-AW.
1501 H Completed exercise.
1523 H Commenced approach (S-1-G). LTJG H.J. Trueblood A.O.
1546 H Completed approach. Surfaced.
1559 H Commenced approach (S-1-G). LTJG H.J. Trueblood A.O.
1624 H Completed approach. Set course 346° T to anchorage.
1734 H Anchored off Chalien Tao.

4 February 1948

0646 H Underway for Operating Area.
0756 H Commenced Y-30-AW with U.S.S. TURNER.
1029 H Completed exercise.
1050 H Commenced Y-41-AW.
1200 H Position Lat. 35°-36' N; Long. 120°-55' E.
1214 H Completed exercise.
1225 H Commenced Y-41-AW.
1313 H Completed exercise.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1329 H Set course 320° T for Outer Harbor, Tsingtao.

1554 H Anchored in Outer Harbor, Tsingtao, China.

5 February 1948

0654 H Underway for Okinawa in accordance with CTG 71.2 despatch 301350Z of January 1948.

0941 H Commenced 6 hr. battery discharge.

1200 H Position Lat. $35^{\circ}-32'$ N; Long. $121^{\circ}-22'$ E.

1547 H Surfaced. Completed 6 hr. battery discharge. Score 94.4%. It is believed that the ammeters undoubtedly require calibration as they have not been calibrated since overhaul October, 1947. The battery has had 69 cycles and this is the first discharge since installation.

1555 H Set course for rendezvous with U.S.S. FLORIKAN.

2000 H Commenced radar tracking, Exercise S-26-CC, with U.S.S. FLORIKAN as target.

2117 H Completed exercise. FLORIKAN took position astern, 2000 yards.

Fox Schedule Reception, Exercise S-22-C.

6 February 1948

0031 H Visual contact ship bearing 178° T, range 14,000 yards. Course 330° T, speed 9 kts.

0053 H SS radar contact ship bearing 210° T, range 18,300 yards. Course 310° T, speed 10 kts.

0105 H Visual contact ship bearing 195° T, range 14,000 yards. Course 290° T, speed 8 kts.

0320 H Opened range on FLORIKAN for dawn attack.

0445 H SS radar contact ship bearing 182° T, range 20,000 yards. Course 110° T, speed 8 kts.

0620 H Submerged on track of target.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0628 H Commenced approach (Exercise S-1-G). LCDR R.M. Carroll, A.O. Seas too rough for torpedo recovery.
- 0742 H Completed approach.
- 0800 H Visual contact, high periscope, ship bearing 085° T, range 18,500 yards.
- 1038 H SS radar contact on Saishuto Island bearing 060° T, distant 69 miles.
- 1200 H Position Lat. 32°-39' N; Long. 125°-42' E.
- 1304 H Commenced Sonar Tracking, Exercise S-101-CC, Part One.
- 1446 H Surfaced.
- 1517 H Held Visual Operation Semaphore Tests with U.S.S. FLORIKAN, Exercise S-71-C.
- 1600 H Held Visual Operators Flashing Light Test with U.S.S. FLORIKAN, Exercise S-72-C.
- 1700 H Opened range from FLORIKAN to 12,000 yards for night attack.
- 1952 H Commenced radar tracking.
- 2007 H Submerged for night attack (Exercise S-1-G).
- 2028 H Completed approach.
- 2310 H SS radar contact on ship bearing 116° T, range 19,000 yards. Course 265° T, speed 7 kts.
- Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training by ENS E.P. Travers. Exercise S-11-C.
Manipulation of Loran Equipment, Exercise S-76-CC, by LCDR R.M. Carroll.

7 February 1948

- 0100 H SS radar contact on ship bearing 250° T, range 16,450 yards. Course 330° T, speed 10 kts.
- 0224 H SS radar contact on two ships bearing 104° T, range 19,140 and 22,000 yards respectively. Course 000° T, speed 4 kts.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 0300 H Opened range on FLORIKAN for dawn attack.
- 0611 H Commenced approach (Exercise S-1-G). LT E. Pridonoff, A.O.
- 0655 H Completed approach. Making end around.
- 0900 H Submerged for approach (Exercise S-1-G). LT A.W. Gillis, A.O.
- 0930 H Completed approach. Surfaced.
- 1200 H Position Lat. $28^{\circ}-43'$ N; Long. $127^{\circ}-25'$ E.
- 1412 H Commenced approach (Exercise S-1-G). LCDR R.M. Carroll, A.O.
- 1431 H Fired one exercise torpedo. It was a well conducted approach resulting in a hit. The FLORIKAN did an excellent job of recovering the torpedo. A torpedoman was transferred to the FLORIKAN with tools and HRT for after run treatment.
- 1515 H Opened range for practice approach.
- 1601 H Commenced approach (Ex. S-1-G). LT E. Pridonoff, A.O.
- 1631 H Completed approach.
- 1632 H SS radar contact on Tori Shima bearing 164° T, distant 25 miles. Set course 175° T for northern tip of Okinawa.
- 2300 H Set course 158° T passing through straits.
- Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training by ENS J.R. Johnson, Exercise S-11-C.

8 February 1948

- 0048 H Set course 138° T for entrance to Buckner Bay, Okinawa.
- 0636 H SS radar contact, ship bearing 231° T, range 18,100 yards.
- 0915 H Commenced one hour battery discharge (Ex. S-22-E). Capacity 99.6%.
- 1044 H Entered channel to Buckner Bay.
- 1159 H Anchored in Buckner Bay. Ships present: U.S.S. PINE ISLAND, U.S.S. HARWOOD, U.S.S. NORRIS, U.S.S. BERRY, U.S.S. SEA FOX, U.S.S. FLORIKAN.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1430 H Called on Captain W.O. Burch, CTG 75.3. A conference was held on ASW exercises to be held the forthcoming week.

Set clocks ahead one hour to conform with -9 Zone time.

9 February 1948

0643 I Underway for operating area to work with Privateer.

0846 I Commenced Y-84-AW.

1130 I Completed Y-84-AW.

1200 I Position Lat. 25°-56' N; Long. 128°-00' E.

1300 I Commenced Y-40-AW with U.S.S. NORRIS (DD859) and U.S.S. HARWOOD (DD861).

1600 I Completed exercise. Set course for Buckner Bay.

1727 I Moored port side to U.S.S. PINE ISLAND (AV12).

10 February 1948

0652 I Underway for operating area.

0800 I On station in Area.

0828 I Commenced Y-81-AW.

1053 I Completed exercise. Searched for Sonobuoys. Recovered two.

1200 I Position Lat. 26°-09' N; Long. 128°-10' E.

1241 I Made rendezvous with U.S.S. HARWOOD (DD861) and U.S.S. BERRY (DD858).

1324 I Commenced Y-41-AW with DD's.

1607 I Completed exercise. Had previously arranged with U.S.S. FLORIKAN to rendezvous after completion of destroyer exercises.

1628 I Commenced approach on U.S.S. FLORIKAN (Ex. S-1-G). LT E. Pridonoff, A.O.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1647 I Fired torpedo. Hit 20 yds. aft M.O.T.
- 1721 I Commenced approach (Ex. S-1-G). LTJG H.J. Trueblood, A.O.
- 1747 I Fired torpedo. Hit 20 yds. forward of M.O.T. Set course to vicinity of Tsugen Island.
- 2120 I Received torpedo aboard. Stayed underway overnight.

11 February 1948

- 0800 I In area awaiting arrival of U.S.S. HARWOOD (DD861).
- 0830 I Commenced Y-52-AW.
- 0924 I Completed exercise.
- 0942 I Commenced Y-52-AW.
- 1009 I Completed exercise.
- 1018 I Commenced Y-52-AW.
- 1049 I Completed exercise.
- 1145 I Rendezvous with U.S.S. FLORIKAN for torpedo firing.
- 1200 I Position Lat. 26°-18' N; Long. 128°-09' E.
- 1255 I Commenced approach (Exercise S-1-G). LTJG J.E. Bonds, A.O.
- 1321 I Fired torpedo. Hit 10 yards forward M.O.T. This was an excellent approach.
- 1400 I Commenced approach (Exercise S-1-G). LT A.W. Gillis, A.O.
- 1420 I Fired torpedo. Miss, ran down port side 10 yards off target's track. The firing was a "Down the throat" shot.
- 1430 I Surfaced and set course for Buckner Bay.
- 1620 I Received two torpedoes from FLORIKAN.
- 1730 I Moored starboard side to U.S.S. FLORIKAN taking on 20,000 gals. diesel oil.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

12 February 1948

- 0635 I Underway for operating area, to engage in ASW services for Destroyers HARWOOD, BERRY and NORRIS, with plane. Y-90-AW.
- 0930 I On station circling.
- 1016 I Commenced Y-90-AW.
- 1200 I Position Lat. $25^{\circ}-37'$ N; Long. $127^{\circ}-57'$ E.
- 1316 I Completed Y-90-AW.
- 1337 I Held seven man overboard drills, one for each officer.
- 1500 I Held Maneuvering Exercise S-13-E for forty minutes.
- 1600 I Set course for our 2400 position for Y-91-AW with three Destroyers and one plane.
- 1630 I Cancelled night exercise.
- 1720 I Set course for Buckner Bay.
- 1730 I Moored port side to U.S.S. PINE ISLAND (AV12).

13 February 1948

- 0555 I Underway for operating area.
- 0856 I In area circling on station.
- 0902 I Commenced Y-90-AW.
- 0915 I Submerged to 90 feet.
- 1133 I Completed Y-90-AW.
- 1200 I Position Lat. $25^{\circ}-35'$ N; Long. $128^{\circ}-00'$ E.
- 1205 I Set course for Buckner Bay, 000° T.
- 1538 I Moored portside to U.S.S. SEA FOX alongside PINE ISLAND (AV12).

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

14 February 1948

- 1403 I Underway to anchor in berth 197. The wind was picking up and we were bumping against SEA FOX. Also, SEA DOG was getting in tomorrow and probably desired to get alongside.
- 1436 I Anchored.

15 February 1948

- 1701 I Underway for entrance of Buckner Bay. Course for Pearl will be set at midnight, but desired to clear harbor which has no navigational landmarks for night piloting.
- 1800 I Made trim and training dive.
- 1900 I ENS J.R. Johnson commenced Navigating.
Fox Schedule Reception, Exercise S-22-C.

16 February 1948

- 0000 I Enroute Midway Island on course 074° T at standard speed on three main engines. The sea was calm so decided to build up a little velvet. With so many storms north of us felt that sooner or later we would run into rough weather.
- 1200 I Position Lat. 27°-20' N; Long. 133°-10' E.
Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-CC.

17 February 1948

- 0654 I Made trim and training dive.
- 0900 I Held study hour for Qualification Notebook Work and Progress Course.
- 1100 I The starboard propellor guard support has been broken in two places. It is hoped that it will last to Midway where we shall cut it entirely off.
- 1200 I Position Lat. 28°-33' N; Long. 139°-41' E.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

- 1300 I Held steering casualty drills.
- 1500 I Study hour same as 0900.
- 1508 I Sighted two ships, tug and tow, bearing 320° T, range 12,000 yards;
course 330° T, speed 5 kts.
- 1530 I Maneuvering to pick up some floating fish buoys.
- 2000 I ENS J.R. Johnson completed 2 days of Navigation.
- 2100 I Set clocks ahead one hour to -10 Zone time.

Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-CC.

18 February 1948

ENS E.P. Travers commenced Navigating.

- 0005 K SS radar contact, small ship, bearing 045° T, range 10,000 yards.
Course 300° T, speed 8 kts.
- 0900 K Held study hour for Qualification Notebook Work and Progress Course.
- 1053 K Made trim and training dive.
- 1200 K Position Lat. $29^{\circ}-17'$ N; Long. $146^{\circ}-00'$ E.
- 1400 K Study hour same as 0900.
- 2047 K Visual contact on ship bearing 125° T, range 9,000 yards.

Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-CC.

19 February 1948

- 0600 K The forward section of starboard propellor guard has carried away.
- 0900 K Held study hour for Qualification Notebook Work and Progress Course.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

1200 K Position Lat. $29^{\circ}-52'$ N; Long. $151^{\circ}-40'$ E.

1400 K Study hour same as 0900.

Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-GG.
ENS E.P. Travers completed two days of Navigating.

20 February 1948

LT E. Pridonoff commenced navigating.

0900 K Held study hour for Qualification Notebook Work and Progress Course.

1200 K Position Lat. $29^{\circ}-57'$ N; Long. $157^{\circ}-45'$ E.

Set clocks ahead one hour to conform with -11 Zone time.

1330 L Whip antenna dropped to main deck. With men lashed to radar mast (state 5 sea) managed to reinstall whip antenna.

1400 L Study hour same as 0900.

Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-GG.

21 February 1948

0210 L SS radar contact on ship bearing 065° T, range 12,000 yards. Course 250° T, speed 15 kts.

0900 L Held study hour for Qualification Notebook Work and Progress Course.

1200 L Position Lat. $29^{\circ}-54'$ N; Long. $162^{\circ}-39'$ E.

1400 L Study hour same as 0900.

2350 L Visual contact on ship bearing 120° T, range 12,000 yards. Course 280° T, speed 10 kts.

Fox Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-GG.
LT E. Pridonoff completed two days of Navigating.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

22 February 1948

LTJG H.J. Trueblood commenced navigating.

0500 L SS radar contact on ship bearing 140° T, range 24,450 yards. Course 280° T, speed 10 knots.

0900 L Held study hour for Qualification Notebook Work and Progress Course.

1200 L Position Lat. $29^{\circ}-20'$ N; Long. $169^{\circ}-01'$ E.

1400 L Study hour same as 0900.

Fog Schedule Reception, Exercise S-22-C.
Cryptographic Training, Exercise S-11-C.
Loran Manipulation, Exercise S-76-CC.

23 February 1948

0704 L Made trim and training dive.

1200 L Position Lat. $28^{\circ}-46'$ N; Long. $174^{\circ}-34'$ E.

LTJG H.J. Trueblood completed two days of navigating.

23 February 1948

LTJG J.E. Bonds commenced navigating.

1200 Y Position Lat. $28^{\circ}-23'$ N; Long. $179^{\circ}-40'$ E.

1300 Y Crossed International Date Line. Repeated Monday.

24 February 1948

0407 Y SS radar contact on Midway bearing 090° T, distant 46,000 yards.

0645 Y Crash boat met us outside and escorted us in.

0718 Y Moored to Pier 5 at Sub Base, Midway. LT Jim Woodling was there to greet us. Called on C.O. of N.O.B.

1148 Y Underway for Pearl Harbor, T.H.

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

25 February 1948

Very rough seas from the East.

0900 Y Set clocks ahead one hour to /11 Zone time.

1200 X Position Lat. $24^{\circ}-14'$ N; Long. $171^{\circ}-34'$ W.

LTJG J.E. Bonds completed two days of navigating.

26 February 1948

0800 X Held field day.

1200 X Position Lat. $22^{\circ}-18'$ N; Long. $165^{\circ}-20'$ W.

27 February 1948

0700 X Made trim and training dive. Held field day.

0900 X Set clocks ahead one hour to /10 Zone time.

1200 W Position Lat. $21^{\circ}-32'$ N; Long. $162^{\circ}-00'$ W.

28 February 1948

Moored Sub Base, Pearl Harbor, T.H.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(C) WEATHER

1. PEARL HARBOR TO SYDNEY, AUSTRALIA

Weather conditions from Pearl Harbor to Sydney were moderate. Prevailing winds were from the directions and in the force shown by the pilot charts and sailing directions.

2. SYDNEY, AUSTRALIA, TO OKINAWA JIMA

Ideal conditions were experienced as far as Yap Island. However, from there on to Okinawa the sea picked up to state seven proportion and the north north east wind attained a velocity of thirty knots.

3. OKINAWA - TSINGTAO AREAS

Weather encountered during operation off Okinawa was excellent. The opposite was true of Tsingtao, where the extremely cold weather and usual rough seas made operations uncomfortable.

4. OKINAWA TO PEARL HARBOR

No unusual weather was encountered on this trip.

(D) TIDAL INFORMATION

1. PEARL HARBOR TO SYDNEY, AUSTRALIA

From a study of pilot charts, tide and current tables, and sailing directions, equatorial counter currents were expected between 5° N and 8° N; however, none were encountered and the set continued to be to the west. In approaching Sydney a 2 to 3 knot current setting to the south was anticipated within 10 miles of the Australian coast, but was actually established as far out as 30 miles.

2. SYDNEY TO OKINAWA

Upon departure Sydney the 2 to 3 knot southerly current off the coast continued to be felt until abreast of Brisbane. Current in the Bismark sea was as described in the pilot charts. In Vitiaz Strait the current was 2 knots northerly and not northwesterly as expected from pilot chart data. The counter equatorial currents were experienced this time between 4° N and 8° N setting 090° T at 2 knots.

DECLASSIFIED

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

3. OKINAWA - TSINGTAO AREA

The Japanese current northwest of Okinawa was not encountered either on the trip to Tsingtao or on return.

4. OKINAWA TO PEARL HARBOR

No unusual tidal data was encountered in this trip.

(E) NAVIGATIONAL AIDS

1. CANTON ISLAND

Musick Light was not illuminated, but a large tower on the north west corner had an 8 second flashing light. This light is not listed or described anywhere - the tower, however, is shown on the chart right next to conspicuous palm tree. The loom of the light was picked up at eighteen miles.

2. SYDNEY, AUSTRALIA

In approaching Sydney at night, Southhead Light at the southern entrance to Sydney harbor is the most important navigational aid. Its characteristics are in accordance with charts and light lists. Radar determination of Sydney harbor entrance is difficult due to similar land characteristics of other harbor openings in the vicinity.

3. BUCKNER BAY, OKINAWA

This is a difficult place to approach for the first time at night. There are no navigational lights and radar piloting is hampered due to lack of clearly defined land marks.

Two wrecks off the southern end of the entrance are the most beneficial aids for daytime approach.

Within Buckner Bay itself buoys as listed on the chart can not be relied upon, but no difficulty is encountered in making the anchorage as there are several towers and alphabetical beacons for use in cutting in position.

4. TSINGTAO

The approach to Tsingtao is clearly defined by two islands, Taikung Tao and Siaokung Tao, about ten miles off the entrance. Passage is made between them in going to and from Okinawa and the operating areas.

During weekly operations ships anchor off Chalien Tao island about 30 miles southeast of Tsingtao.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(F) SHIP CONTACTS

No.	Time Date	Lat. Long.	Type	Initial Range	Est. Course Speed	How Contacted	Remarks
1.	2101 L 12/14/47	32-44 S 153-19 E	UNK	55,000	222° T 12 kts.	R(SS)	
2.	0224 L 12/15/47	Off Syd- ney, Aus.	UNK	46,400	000° T 8 kts.	R(SS)	
3.	0458 L 12/15/47	Off Syd- ney, Aus.	AK	18,000	330° T 6 kts.	R(SS)	
4.	0611 L 12/15/47	Off Syd- ney, Aus.	AK	23,000	350° T 6 kts.	R(SS)	
5.	2018 K 12/21/47	25-18 S 155-30 E	UNK	41,200	200° T 10 kts.	R(SS)	
6.	1916 K 12/22/47	19-50 S 156-39 E	AK	25,000	195° T 11 kts.	R(SS)	
7.	1455 K 12/24/47	10-10 S 156-40 E	UNK	46.7 miles	South ?	R(SS)	
8.	2207 K 12/24/47	10-15 S 156-30 E	UNK	70 miles	?	R(SS)	
9.	1802 K 12/26/47	05-40 S 147-10 E	UNK	50,000	120° T 10 kts.	R(SS)	
10.	1516 H 1/11/48	30-43 N 126-40 E	2 Fishing Vessels	16,000	150° T 5 kts.	SD	
11.	1525 H 1/11/48	30-44 N 126-50 E	2 Fishing Vessels	20,000	150° T 5 kts.	SD	
12.	0031 H 2/6/48	34-25 N 122-45 E	Fishing Vessel	14,000	330° T 9 kts.	SN	
13.	0053 H 2/6/48	34-23 N 122-50 E	Fishing Vessel	18,300	310° T 10 kts.	R(SS)	
14.	0105 H 2/6/48	34-18 N 122-58 E	Fishing Vessel	14,000	290° T 8 kts.	SN	

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(F) SHIP CONTACTS (Continued)

No.	Time Date	Lat. Long.	Type	Initial Range	Est. Course Speed	How Contacted	Remarks
15.	0445 H 2/6/48	33-48 N 123-48 E	Fishing Vessel	20,000	100° T 8 kts.	R(SS)	
16.	0800 H 2/6/48	33-15 N 124-35 E	Fishing Vessel	18,500	330° T 8 kts.	High Periscope	
17.	2310 H 2/6/48	31-32 N 126-12 E	Fishing Vessel	19,000	265° T 7 kts.	R(SS)	
18.	0100 H 2/7/48	31-02 N 126-22 E	Fishing Vessel	16,450	330° T 10 kts.	R(SS)	
19.	0224 H 2/7/48	30-45 N 126-37 E	2 Fishing Vessels	19,140 22,000	000° T 4 kts.	R(SS)	
20.	0048 H 2/8/48	Off Buckner Bay	AK	18,000	045° T 9 kts.	R(SS)	
2108	1508 I 2/17/48	28-30 N 140-25 E	Tug and Tow	12,000	300° T 5 kts.	R(SS)	
22.	0005 K 2/18/48	28-45 N 142-40 E	UNK	10,000	300° T 8 kts.	R(SS)	
23.	2047 K 2/18/48	29-30 N 148-10 E	AK	9,000	275° T 6 kts.	SN	
24.	0210 L 2/21/48	29-50 N 160-50 E	UNK	12,000	250° T 15 kts.	R(SS)	
25.	2350 L 2/21/48	29-35 N 166-23 E	AK	12,000	280° T 10 kts.	SN	
26.	0453 L 2/22/48	29-28 N 167-16 E	UNK	24,450	280° T 10 kts.	R(SS)	

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(G) AIRCRAFT CONTACTS

CONTACT NO.	1	2
Date	11-28-47	12-4-47
S U Time (zone)	1902 (X)	0340 (X)
B M Position: Latitude	20°-40' N	02°-15' S
A R Longitude	158°-30' W	171°-30' W
I N Speed	14.5 knots	16 knots
E Course	217° T	235° T
Trim	Surface	Surface
Radar Search	Cont./SS	Cont./SS
Number	1	1
A I Type	Unknown	Unknown
R Mission	Unknown	Unknown
C R How contacted	Radar (SS)	Radar (SS)
A F Initial Range	44,600	44,000
T Elevation	Unknown	Unknown
Detect Submarine	Unknown	Unknown
Sea: State	1	1
C O Direction	090° T	090° T
N D Visibility	7	6
I T Clouds: Height	10,000	10,000
I O % overcast	40 %	20 %
N		

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(H) ATTACK DATA

U.S.S. RAZORBACK (SS394). Torpedo Attack No. 1 Patrol No. 2 Time: 1601 H
Date: 7 January 1948 Lat. 28°-25.8' N; Long. 127°-38.1' E. Fired by LCDR
R.M. Carroll.

TARGET DATA

Description: Single target, the U.S.S. FLORIKAN (ASR9). Contacted visually.
Weather: State 2 sea, overcast, and wind force 10 from 330° T.
Target Draft: 18 feet. Course (Actual): 138° T. Speed (Actual): 14 kts.
Range at firing: 2200 (Used): 137° T. (Used): 14 kts.

OWN SHIP DATA

Speed: 3.5 knots. Course: 240. Depth: 64 feet. Angle: 1.5° Down.

FIRE CONTROL AND TORPEDO DATA

Type Attack: A daylight submerged approach was conducted. All fire control
equipment operated satisfactorily.

Tubes Fired:-	#4
Track Angle:-	65° Port.
Gyro Angle:-	6° Right.
Depth Set:-	30 Feet.
Torpedo Run:-	1900 Yards.
Power:-	High.
Hit or Miss:-	Hit (7 yards aft MOT).
Erratic:-	No.
Mark Torpedo:-	14-3 A.
Serial Number:-	40179.
Firing Interval:-	8 seconds.
Type Spread:-	Divergent.
Sea Conditions:-	State 2.
Overhaul Activity:-	Submarine Base, Pearl Harbor, T.H.

Remarks by Approach Officer on Attack No. 1

This firing took place off Buckner Bay, Okinawa Jima, on 7 January 1948. Advantage was taken of a state 2 sea to take frequent short exposures at long range to determine quickly target speed and approximate zig plan. The zigs were estimated to be occurring at intervals of three and six minutes and speed solved at fourteen knots. At the critical range (3500) yards the target had just zigged away presenting a port 60 angle on the bow. The approach officer found himself in Situation Three which decrees shooting on the present

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Remarks by Approach Officer on Attack No. 1 (Continued)

leg on a 50 to 70 track. However, due to the fact the target was believed to be on a three minuted leg from previous analysis of the zig plan, the approach officer came to a 110 track, continued closing, and waited for the next zig. It occurred as anticipated. The target swung towards thirty five degrees with the range at 2300 yards leaving the submarine on a 60 port track. Time permitted but a five degree course changed to the left in seeking a better track before shooting.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

U.S.S. RAZORBACK (SS394). Torpedo Attack No. 2. Patrol No. 2. Time: 1647 (-9 ZT). Date: 10 February 1948. Lat. 26°-09' N; Long. 128°-14' E. Fired by LT E. Pridonoff.

TARGET DATA

Description: Single target, the U.S.S. FLORIKAN (ASR9). Contacted visually.
Target Draft: 18 feet. Course: (Actual): 040°. Speed (Actual): 14 knots.
(Used): 046° (Used): 13 knots.
Range(at firing) 2400 yards.

OWN SHIP DATA

Speed: 3.5 knots. Course: 171°. Depth: 62 feet. Angle: 1° Down.

FIRE CONTROL AND TORPEDO DATA

Type Attack: A daylight submerged approach was conducted. All fire control equipment operated satisfactorily.

Tubes Fired:-	#4.
Track Angle:-	38° Port.
Gyro Angle:-	18° Right.
Depth Set:-	30 Feet.
Torpedo Run:-	1800 Yards.
Power:-	High.
Hit or Miss:-	Hit (20 yards aft MOT).
Erratic:-	No.
Mark Torpedo:-	14-3 A.
Serial Number:-	40179.
Firing Interval:-	8 Seconds.
Type Spread:-	Divergent.
Sea Conditions:-	State 2.
Overhaul Activity:-	Submarine Base, Pearl Harbor, T.H.

Remarks by Approach Officer on Attack No. 2

The firing was conducted in operating area off Buckner Bay, Okinawa Jima. At the time of firing the target was on course 040° T (TDC generated 046° T) speed 14 knots (TDC generated 13 knots). The submarine was in situation # 1. Target on the starboard bow, angle on the bow port 30°. Came right and fired on a sharp port track. In self criticism it may be said that the changes in target's course weren't caught soon enough. This was due to too few observations in the early stages of the approach. The torpedo was aimed at the MOT and was observed to pass 20 yards abaft the MOT. The torpedo ran hot, straight and normal. It was recovered and returned on board by the target vessel, the U.S.S. FLORIKAN.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

U.S.S. RAZORBACK (SS394). Torpedo Attack No. 3. Patrol No. 2. Time: 1736(-9).
Date: 10 February 1948. Lat. 26°-10' N; Long. 128°-13.5' E. Fired by LTJG
H.J. Trueblood, U.S.N.

TARGET DATA

Description: Single target, the U.S.S. FLORIKAN (ASR9). Contacted visually.
Target Draft: 18 feet. Course (Actual): 340°. Speed (Actual): 14 kts. Range
(at firing): 1400. (Used): 342°. (Used): 13 kts.

OWN SHIP DATA

Speed: 3 knots. Course: 048°. Depth: 63 feet. Angle: 1.5° Down.

FIRE CONTROL AND TORPEDO DATA

Type Attack: A daylight submerged approach was conducted. All fire control
equipment operated satisfactorily.

Tubes Fired:-	#7.
Track Angle:-	70 starboard.
Gyro Angle:-	0.
Depth Set:-	30 Feet.
Torpedo Run:-	1300 Yards.
Power:-	High.
Hit or Miss:-	Hit (20 yards fwd. MOT).
Erratic:-	No.
Mark Torpedo:-	14-3 A.
Serial Number:-	26715.
Firing Interval:-	8 Seconds.
Type Spread (Simulated):-	Divergent.
Sea Conditions:-	State 2.
Overhaul Activity:-	Submarine Base, Pearl Harbor, T.H.

Remarks by Approach Officer on Attack No. 3

Firing was conducted in operating area off Buckner Bay, Okinawa Jima. Initial range 9000 yards, AOB 3° starboard. Standard approach tactics were used and all zigs were detected within one minute. Target speed was solved by eight minutes problem time. The observations at the critical range detected the target zigging to his left, range 3250, AOB 12 starboard, relative bearing 036°, distance to the track 650 yards. Due to the short distance to the track and catching the target on the zig the A.O. came left full at standard speed and fired when the after gyros were zero. The situation upon firing was relative bearing 171°, torpedo run 1300 yards, track 70 starboard, three minutes 30 seconds since last zig. Torpedo ran hot, straight and normal, passed 20 yards forward of M.O.T. and was retrieved by the target vessel. Torpedo was received aboard in good condition.

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

US.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

U.S.S. RAZORBACK (SS394). Torpedo Attack No. 4 Patrol No. 2 Time: 1321(-9).
 Dated: 11 February 1948 Lat. 26°-17' N; Long. 128°-10' E Fired by LTJG J.E.
 Bonds.

TARGET DATA

Description: Single target, the U.S.S. FLORIKAN (ASR9). Contacted visually.
 Target Draft: 18 feet Course (Actual): 235° Speed (Actual): 14 kts. Range
 (at firing): 1180. (Used): 226° (Used): 14 kts.

OWN SHIP DATA

Speed: 4 knots. Course: 103° T. Depth: 62 feet. Angle: 2° Down.

FIRE CONTROL AND TORPEDO DATA

Type attack: A daylight submerged approach was conducted. All fire control equipment operated satisfactorily.

Tubes Fired:-	#2.
Track Angle:-	80 Starboard.
Gyro Angle:-	9° Right.
Depth Set:-	30 Feet.
Torpedo Run:-	1000 Yards.
Power:-	High.
Hit or Miss:-	Hit (10 yards fwd. MOT).
Erratic:-	No.
Mark Torpedoes:-	14-3 A.
Serial Number:-	26516.
Firing Interval:-	8 Seconds.
Type Spread:-	Divergent.
Sea Conditions:-	State 2.
Overhaul Activity:-	Submarine Base, Pearl Harbor, T.H.

Remarks by Approach Officer on Attack No. 4

This firing took place off Buckner Bay, Okinawa Jima, on 11 February 1948. During first few minutes of approach angle on bow was 0°. Three observations enabled TDC and plot to obtain accurate speed estimate of 14 knots which was used throughout the problem. When target was at the critical range the distance to track was less than 1000 yards and target had not zigged within two minutes which is situation number two. When the target zigged left at 1600 yards the rudder was put over hard right and speed increased. Although this reduced the gyro angle it was undesirable for two reasons: 1st - It could possibly cause TDC to hunt; 2nd - it could reduce torpedo run to value less than the distance required for torpedo to settle at running depth. The torpedo was fired on a 80° starboard track. The angle on the bow was overestimated 9° which caused torpedo to pass 10 yards forward of MOT. The torpedo was recovered by the FLORIKAN and returned aboard.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

U.S.S. RAZORBACK (SS394) Torpedo Attack No. 5 Patrol No. 2 Time: 1420 (-9)
Date: 11 February 1948 Lat. 26°-16' N; Long. 128°-10' E Fired by LT A.W. Gillis.

TARGET DATA

Description: Single target, the U.S.S. FLORIKAN (ASR9). Contacted visually.
Target Draft: 18 feet. Course (Actual): 290° T. Speed (Actual): 15 knots.
Range (at firing): 1600. (Used): 285° (Used): 14.5 knots.

OWN SHIP DATA

Speed: 3.5 knots. Course: 120° T. Depth: 62 feet. Angle: 1° Down.

FIRE CONTROL AND TORPEDO DATA

Type Attack: A daylight submerged approach was conducted against a zig-zagging target. All fired control equipment operated satisfactorily.

Tubes Fired:-	#4.
Track Angle:-	10° Port.
Gyro Angle:-	21° Left.
Depth Set:-	30 Feet.
Torpedo Run:-	1100 Yards.
Power:-	High.
Hit or Miss:-	Miss (passed 10 yards alongside port side).
Erratic:-	No.
Mark Torpedo:-	14-3 A.
Serial Number:-	64164.
Firing Interval:-	8 Seconds.
Type Spread:-	Divergent.
Sea Conditions:-	State 2.
Overhaul Activity:-	Submarine Base, Pearl Harbor, T.H.

Remarks by Approach Officer on Attack No. 5

This firing exercise was conducted off Buckner Bay, Okinawa Jima, on 11 February 1948. Doctrine was followed throughout approach phase and it was necessary to maneuver much at high speeds as target consistently zigged each time from one angle on the bow to the other. Target's zigs were fortunately detected promptly which greatly helped in deciding attack phase tactics. At critical range, submarine was in situation #2 and target was closed on a sharp track waiting for next zig. Target zigged from a starboard 10° AOB to an estimated 5° port AOB. Due to short range, generated gyro angles and sharp track were accepted. Target was on course 290° (generated 285°) and at speed 15 knots (generated 14.5 knots). This underestimation of angle on the bow by 5 degrees at this short range and sharp track caused torpedo which was fired at MOT to pass 10 yards along target's port side. It was recovered by target vessel and returned aboard.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(I) MINES

None encountered.

(J) ANTISUBMARINE MEASURES AND EVASION TACTICS

No new antisubmarine measures were used against this vessel. During our ASW work with destroyers and planes of the Seventh Fleet sonobuoys were used frequently. With the present length hydrophone attached to these sonobuoys, no difficulty at all was experienced in evading by going down to about 200 feet and creeping slowly away. To assist the planes and destroyers in tracking us with sonobuoys we usually ran at two thirds speed above 100 feet and remained within the pattern.

In the Tsingtao area destroyers consistently ranged on us at 3600 yards, while in Okinawa this was further increased to 4000 yards.

In evading destroyers all possible tactical maneuvers were attempted with varying degrees of success. The most effective method was to put the destroyers on the quarter, let the range close to approximately 2000 yards, commence a high speed turn towards and when the range had decreased to 800 yards, put the rudder hard over in the other direction and turn away. The destroyers invariably caught the first maneuver, developed their lead angle, but too late caught the zig away with a resultant miss.

(K) MAJOR DEFECTS AND DAMAGE

1. ENGINEERING

Cylinder Liner Water Jackets

This vessel experienced seven cracked cylinder liner water jackets during the patrol. All cracks were about one inch in length.

On 2 December 1947 water jacket of number one unit, number three main engine, cracked vertically from the indicator cock valve. This liner was changed underway on 27 December 1947. The engine was out of commission for a period of three days and eleven hours.

On 10 December 1947, water jacket of number nine unit, number one main engine, cracked vertically from the indicator cock valve. This liner will be replaced upon return to Pearl in conjunction with an engine overhaul.

On 3 January 1948, water jacket of number seven unit, number four main engine, cracked vertically from the air start valve. This liner was renewed on 11 January 1948. The engine was out of commission three and a half days.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

On 13 January 1948, water jackets of units number two, five and ten of number three main engine developed cracks extending vertically from the air start valves. These liners were renewed on 26 January 1948. The engine was out of commission 4 days and three hours.

On 17 February 1948, water jacket of number one unit, number four main engine, cracked vertically from indicator cock valve. This liner will be renewed upon return to Pearl.

Fresh Water-Salt Water Coolers

On 12 December 1947, the Harrison fresh water-salt water cooler of number on engine developed a leak. The cooler was pulled and three fresh water tubes were blocked. A test of 150# was put on the cooler before reinstallation. The engine was out of commission for a period of one day and five hours.

Fuel Oil Purifier Bowl

Enroute Okinawa to Tsingtao the purifier bowl of #1 fuel oil purifier became so out of balance that it was impractical to use it. The cause of this is unknown. The bowl will be rebalanced, if possible, by the base upon return to Pearl.

Voltage Regulators I.C. Motor Generators

During ASW work period 14 January - 5 February 1948, the voltage regulators of #2 and #3 I.C. motor generators failed. They would not hold the voltage when under load in automatic. Ship's force has been unable to locate the source of trouble due to the fact that under no load conditions all circuits seem satisfactory. The cause of the casualty is believed to be due to the excessive change of load placed on the I.C. motor generators when the WFA-1 sound gear is being used. A fluctuation of as much as 40 amperes was not uncommon. The source of trouble will be determined and repaired upon return to Pearl.

2. HULL

(a) While underway for Sydney, Australia, on 9 December 1947, the drive belts on #1 air conditioning machine stretched causing them to slip. These belts were installed during the Navy Yard overhaul. This defect was corrected by moving the motor back and thereby tightening the belts.

(b) During ASW operations off Okinawa on 23 January 1948, the port hydraulic piston on #1 periscope developed an excessive leak. The piston was repacked with Garlock Chevron packing and the leak stopped.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(c) Enroute Sydney on 14 December 1947, the stop valve on #1 air conditioning plant freon supply to the Control Room booster unit froze up and would not function. This valve was replaced from spares. The plant was out of commission for approximately two hours.

(d) The superstructure deteriorated badly due to heavy weather, especially the bitumastic on the pressure hull which came off in large areas. Due to no up-keep period during the patrol the rust and corrosion became excessive and extensive work will be necessary during post patrol upkeep period.

(e) While operating in the Tsingtao area during extremely cold weather #2 periscope upper window iced over within a few seconds after exposure. The following publications were consulted for a remedy and none was found: Submarine Periscope, Type II, Serial No. 121; Submarine Periscope, Type III, Serial No. 126, Submarine Periscope, Type IV, Serial 80; Submarine Periscope Manual, NavPers 16,165.

It is felt that due to similar conditions in contemplated operating areas of the future some method of preventing icing, with no deteriorating effect on the periscope, be initiated.

(f) The rubber tile decking installed by San Francisco Naval Shipyard in place of regular burlap backed linoleum proved to be very unsatisfactory. Moisture caused the tiling to deteriorate and lieft especially in the crew's dinette. The entire deck will require renewing during the upkeep period. The light color and rubber composition resulted in a dirty deck which required constant cleaning in order to look presentable. The grease and oil inherently present in a submarine makes the use of rubber tiling prohibitive.

(g) On February 16, enroute Midway Island from Okinawa the lower forward strut on the starboard propellor guard vibrated loose. The entire forward section commenced vibrating excessively and during the night of the 17th-18th, the forward half of the guard came loose and was lost. This guard had been rewelded on numerous occasions and it is felt that this defect is a result of metal fatigue due to natural vibrations over a period of two (2) years since installation. These propellor guards are the oblong, flattened pipe type and due to the poor durability of this type the regular 4" round pipe guards are believed superior.

3. ORDNANCE AND GUNNERY

Torpedoes

Five exercise MK 14-3A torpedoes were fired in the Okinawa area, all of which ran hot, straight and normal, and were recovered.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

While making the "after run" treatment on torpedo No. 40179 after its second firing run, it was noted that air from the air flask was escaping from the igniter lead. The starting valve was inspected and found to be seating properly. Exact cause of leakage could not be determined without disassembly of afterbody, but it is believed that the leak is from the starting piston.

While making the "after run" treatment on torpedo No. 64164, it was noted that the turbines were making excessive grinding noise during a deck run.

Since there was no chance to fire these torpedoes again prior to the end of patrol, it was decided to wait until torpedo shop personnel and equipment are available to effect repairs.

Fire Control

(a) On day of departure from Pearl, a zero ground was noted on MK 9 T.B.T. Instrument was inspected and found not to be flooded out. After careful inspection the zero ground was isolated to the slip ring assembly which could not be repaired without breaking shaft seal and disassembling unit. Since instrument was still operative, repairs have been delayed until base facilities are available. This same instrument was completely flooded out on deep dive during Post-Navy Yard Overhaul Run. Instrument was removed, repaired and reinstalled by F.C. shop of San Francisco, Naval Shipyard. It is believed that present "zero" ground is due to a slight amount of salt or moisture left in instrument after this casualty.

(b) On 2 January 1948, a heavy wave which caused water to flood into Control Room, flooded out the Mark 10 Bearing Indicator associated with SV Radar, which at that time was open undergoing minor adjustments. It was necessary to replace the 5F and the 1F synchros and to dry out the instrument. Instrument operated properly thereafter.

(c) On 14 January 1948, an excessive overload was noted in the After Gyro Indicator Regulator. Upon inspection of the unit it was found that the left hand stud securing the handwheel unit to the case was missing. Apparently the right hand stud had prevented any excessive torques as long as it was tight, but when it became loose a torque had developed causing the overload. Missing stud was replaced and instrument operated satisfactorily.

(d) A slight oscillation was noted in after angle solver side of TDC on two occasions. This instrument has the new dynamic damping system (OrdAlt 2672) and no adjustments had been previously required since installation. Adjustment was made by varying the resistance to the two small induction motors (DWG # 715635-1). The present type resistances are of the tap-off type (DWG #185769-121 and DWG #212695-16). It is believed that if variable resistors were substituted for present tap-off type that a more fine damping adjustment could be obtained.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(L) RADIO

1. General

Radio reception as a whole was good. Trouble was encountered in the vicinity of Australia during the daylight hours due to atmospheric conditions. At these times reception was impossible on any fleet ship-shore frequency.

NPN and NPM reception was good. Much improvement has been shown by these stations in the clearing of submarine traffic. A continuous watch was maintained throughout the patrol and few sugar numbers were missed. These were readily obtained when a service message was transmitted.

The harbor circuit at Tsingtao was excellent. ComServRon 3 was the controlling station and strict circuit discipline was maintained.

The radiomen received excellent training in the operation of all their equipment and in their CW and voice circuit work.

2. Equipment and Casualties

(a) Receivers:

Performance of all receivers was satisfactory and no casualties were encountered.

(b) TBL Transmitter:

General performance was excellent on both CW and voice transmissions. One casualty was experienced on 1/11/48 when the motor generator was unable to start. The overload relay in the magnetic controller was unable to protect the equipment with a high battery charging voltage. When the relay opened the contact shut. This condition left only the supply fuses to protect the equipment. By resetting the overload relay at a maximum setting and filling the dashpot with symbol 5190 oil, the relay was operative except when on the finishing rate of a battery charge. It is recommended that a resistance be installed in the circuit to drop the voltage to a near normal value during a battery charge.

(c) Antenna System:

The antenna systems often reached low resistance readings after long dives. The turnbuckles on both wing antennas had to be let out a turn to compensate for the contraction caused by low temperatures in the Tsingtao area. The whip antenna proved to be the best for receiving and the starboard wing the best for transmitting.

Antenna performance was considered satisfactory.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(d) Underwater Loop:

Prior to departure from the San Francisco area the underwater loop flooded out. The yard renewed all cables and connections and megger readings were found to be satisfactory. On the second day of the patrol reception was attempted and negative results obtained. A zero ground was located and traced to the loop itself. It is believed that punctures in the loop made by the yard and then renewed, have again developed a leak.

(e) NGA Fathometer:

On 2/8/48 there was no receiver output, the driver output being normal. On checking the receiver the R-710 (plate filter resistor) was found to be practically open. Condensation from the ventilation lines getting into the coupling transformer (T-704) and shorting its primary was the probable cause. T-704 and R-710 were replaced and operation was satisfactory.

(f) 1 & 7 MC:

12/2/47 - Forward bridge speaker out of commission. Tested and located open voice coil. It had open lead between coil and terminal strip. Replaced lead and operation was satisfactory.

2/17/48 - 7 MC bridge reproducer had intermittent operation while transmitting. Discovered relay K-3-P had insufficient spring tension to overcome residual magnetism of the coil. Replaced spring and operation was satisfactory.

(g) SCR-624:

This equipment was used infrequently but operated satisfactorily.

(h) Loran (DAS-3):

Low gain was experienced due to poor receiver intermediate frequency and frequency alignment. The yard had not properly aligned equipment during overhaul. Alignment was accomplished by using a LP-5 signal generator. Operation of equipment was greatly improved.

(M) RADAR

1. SS RADAR

Performance of the SS radar was excellent. It was used approximately 1500 hours, mostly from sunset to sunrise. Its range and bearing accuracy was very good. Operation was hindered due to the fact that the forty thousand yard

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

sweep on the PPI has a delay of approximately 15,000 yards, resulting in the sweep being only about 25,000 yards in length. This condition has been in the equipment since the installation. Efforts by installation technicians and ship's force to eliminate this have been to no avail.

Casualties

11/28/47 SS synchro unit went out of commission. Thirty-six speed synchro generator burned out. Replaced the synchro generator (MK #2 Mod 1A Type 6G) with synchro from spares. Hunting then resulted. This was due to system being hooked up 180 degrees out of phase. When thirty-six speed synchro generator was zeroed 180 degrees out, normal operation resulted. Old synchro had shorted rotor, R1 to R2. Resistance tested $\frac{1}{2}$ ohm between these points. Normal reading should have been 4.5 to 6.5 ohms.

1/14/48 SS range unit went out of commission. No step produced, range error being lit. Checked range unit with TS-34A/AP. Synchronized pulse satisfactory but input wave form to the V(1K)1 (Start-Stop Multi-vibrator) abnormal. When checking resistance measurements C(1K)3 was leaking. Replaced and operation was normal.

1/16/48 All steps on SS PPI short. Range extension control unable to make sweeps long enough. Found R(1C)21 330 ohm cathode bias resistor in output sweep amplifier to be only 160 ohms. After replacing, sweeps were normal lengths.

2. SV RADAR

Performance of the SV radar during this patrol was limited due to the failure of the MK 10 bearing repeater. This made operation very difficult because only relative bearings could be obtained from the PPI. As a result the SV was used only during breakdowns of the SS until replacement parts for the MK 10 were obtained at Tsingtao. Otherwise operation was satisfactory.

1/7/48 SV range indicator went out of commission. There were no sweeps on the main and expanded positions. It was found that V-11 (VR-150) was not firing. After replacing operation was normal.

3. ST RADAR

Operation of the ST radar was entirely satisfactory throughout the patrol.

Casualties

1/30/48 The ST periscope adapter wave guide fitting had a broken cushioning assembly. Removed SS unit No. 19 and tried to silver-solder old assembly, but it wouldn't hold so a new one was made from CRS. Operation was satisfactory but it didn't provide much protection for the wave guide micro switch lever.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(N) SONAR

1. WFA Equipment

The operation of the WFA-1 sound equipment was satisfactory with the exception of the bottomside training. When used as listening gear, the WFA shows much improvement over the WCA series. Its ranging accuracy is fair due to the use of the recording unit. This doesn't appear to be as accurate as the old flashing dial method, however, especially at longer ranges. The heavy AC power load drawn when training the bottomside projector warrants the necessity of the WFA equipment having its own training motor generator. The surges caused by training which attain thirty to forty volts have seriously damaged the ship's IC motor generator voltage regulators. If this condition is prevalent among other submarines with similar equipment, it is recommended that an AC motor generator large enough to handle the WFA's training load be installed to isolate and prevent damaging other equipment.

2. JT Sonar

The operation of the JT sonar equipment was satisfactory. Performance was handicapped, however, due to the NLM system and JP being inoperation the whole patrol because of two electrolytic capacitors for the line filter not being available before departure.

(O) DENSITY LAYERS

No success was had in determining density layers due to failure of the bathythermograph. Shortly after departure on patrol the unit went out of commission. Investigation revealed a faulty temperature element. Upon arrival in Sydney an attempt was made to install a new temperature element but this was unsuccessful when a leak occurred in the capillary tubing. Plugs were put in the hull fittings where the bathythermograph units were removed and the bathythermograph remained inoperative for the duration of the patrol.

(P) HEALTH, FOOD AND HABITABILITY

HEALTH

The general health of the crew during the patrol has been excellent. There have been no epidemics nor outbreaks of communicable disease among the crew during the patrol, and only two (2) admissions to the Sick List because of communicable diseases.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Upon entering the northern latitudes, the expected outbreak of "head colds" and catarrhal fever soon became a thing of reality. Almost all of the crew contracted the condition, and, as was reported in the Preventive Medicine Report for January 1948, " 'twas the exception, rather than the rule, to be without a cold".

So far as the source to which this outbreak can be attributed, it is believed to have stemmed from the fact that this crew was thoroughly acclimated to a tropical climate, and was thrust almost overnight into one in which extreme cold and dampness were prevailing factors. Almost all medication that was used in an effort to cure these common ailments, seemed useless as the natural resistance of the men was lowered.

Two ports of call were visited by this vessel during the patrol. These ports were Sydney, New South Wales, Australia, and Tsingtao, China. Both of these ports have long been known for their unusually high venereal disease rate, and it was with this knowledge in mind that the crew was informed of the conditions that were prevalent, prior to arrival in these ports. As much information as was available was made known to the crew, and they were advised to conduct themselves and protect themselves accordingly. Prophylactic tubes and condoms were available to all men going ashore and were thoroughly utilized. Despite this, one case of venereal disease was contracted while in Tsingtao. This was a case of gonococcus infection of the urethra.

As it happened, the degree of infection in this case was overwhelming, to an extent that made walking a torture for the patient. With a view towards the psychological impact that such an infection would exert upon the "it can't happen to me" group that is found aboard every ship or station, the Medical Department Representative attached to this command made it a point for several members of the crew to view the first hand results of this disease. It very well may have been a breach of professional ethics to have done so, but it definitely jarred the self conferred immunity that several men in this crew believed they possessed.

FOOD

The Navy ration has been adequate, both in quantity and quality. The diet has been well balanced, and reflects that considerable time and planning has been expended upon it, prior to submission for approval. From a medical standpoint, very few diets could have been more properly balanced, particularly toward the latter days of the patrol when stores were rapidly depleting.

As is true in the case of all extended operations, the consumptive rate during the patrol was high during the early stages of the patrol. During rough weather, this rate varied, and in the late days of the patrol, when the nerves had been pulled thin by long days and nights, the food served became the subject of many "beefs".

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

The preparation of food and the care of utensil and stowage spaces has not varied from required standards. There have been no cases of illness that might be traced to improper food handling; the personal health habits of all personnel attached to the Commissary Department has been excellent and has left nothing to be desired from a standpoint of cleanliness.

HABITABILITY

The sanitary and habitability conditions of this vessel during the patrol have been excellent. This, it is believed, may be attributed to a standardized method of cleaning up the ship while underway and of utilizing all possible time while in port to accomplish major items necessary for proper maintenance of sanitary conditions.

While underway, the ship was cleaned daily, either at 1000 or 1400. This rotation plan proved to be effective and has been continued since the ship departed Pearl Harbor last December. Field day has been held routinely and has consisted of a three to four day thorough cleaning prior to arrival in liberty ports.

The ventilation system and heating system in use proved adequate in all climates. Even with the extreme cold that was encountered in the Tsingtao operating area, the ship was thoroughly warm at all times and no discomfort was suffered. The same may be said in regard for the ventilation while operating in tropical waters -- no discomfort was encountered due to an insufficiency in the system.

(C) PERSONNEL

Prior to the commencement of our training patrol, the Educational Officer prepared a list of lectures to be given during the cruise. Officers, Chief Petty Officers and First Class Petty Officers gave these lectures. Two lectures were given each day, Monday through Friday, Saturday being field day and Sunday a day of rest. All lectures were given twice, in the morning and afternoon, so that each section could attend. Lectures were followed by a short written quizz to determine how much information was being absorbed. In conjunction with the "School of the Boat" all men were required to satisfactorily pass the progress course for the next higher rate.

(a) Number of men on board during patrol	66
(b) Number of qualified men at start of patrol	39
(c) Number of men qualified during patrol	//
(d) Number of men transferred during patrol	3
(e) Number of men shipped over durin patrol	2.

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Each officer performed a total of eight days navigation divided into periods of three, three, and two days duration. Loran was used along with celestial to indoctrinate all officers in its use. A total of five torpedoes were fired by junior officers for eighty per cent hits. It is regretted that more firing could not have been performed, but sea conditions in the Tsingtao area prevented torpedo recovery.

During the cruise a ship's paper was started. Lookout, poetry, cribbage, checkers and acey-ducey contests were initiated and prize money awarded the winners. All hands took part.

Despite the fact that on this ninety-four (94) day patrol the ship operated eighty-two (82) days, the morale of the officers and men was extremely high and their performance of duty excellent.

In establishing an overall ship's training program USF 45 was the "bible" and it was endeavored to perform all of the exercises that could possibly be done while operating independently and also when in company with U.S.S. FLORIKAN and destroyers. During these exercises the Commanding Officer or Executive Officer acted as observer. The following exercises were performed:

<u>Exercise</u>	<u>Number Conducted</u>
S-1-G (Rehearsals) Basic Torpedo Exercise	20
S-1-G (Fired) Basic Torpedo Exercise	5
S-4-S Photographic Reconnaissance	1
S-11-E Engineering Run	1
S-12-E Ahead Standard to Back Full, to Ahead Full	4
S-13-E Maneuvering Exercise	7
S-21-E Battery Capacity	1
S-22-E Battery and Electric Main Drive System	1
S-26-CC Single Target Tracking	29
S-101-CC Sonar Tracking	1
S-76-CC Manipulation of Loran Equipment	25
S-11-C Cryptographic Training	44
S-22-C Fox Schedule Reception	52
S-26-C Sonar Communications	50
S-41-C Frequency Shift Exercise	50
S-61-C Voice Radio	50
S-71-C Visual Operations Semaphore	3
S-72-C Visual Operators Flashing Light	2
Dives Section	152
Man Overboard	21

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

(R) MILES STEAMED AND FUEL USED

<u>FROM</u>	<u>TO</u>	<u>MILES</u>	<u>FUEL USED</u>
Pearl Harbor	Sydney, Australia	4483	59,730
Sydney, Australia	Okinawa	4347	49,060
Okinawa	Operations	588	5,630
Okinawa	Tsingtao	769	7,800
Tsingtao	Operations	1402	18,010
Tsingtao	Okinawa	769	12,300
Okinawa	Operations	525	5,050
Okinawa	Midway	2902	37,700
Midway	Pearl Harbor	1200	19,100
	TOTAL	16,985	215,380

(S) DURATION

Days Pearl Harbor to Sydney	17
Days Sydney	4
Days Sydney to Okinawa	16
Days Okinawa area	6
Days Okinawa to Tsingtao	3
Days Tsingtao area	24
Days Tsingtao to Okinawa	3
Days Okinawa area	7
Days Okinawa to Pearl Harbor	<u>14</u>
TOTAL	94
Days underway	80
Days in port	<u>14</u>
TOTAL	94
Days submerged (all day dives)	3
Total hours submerged	144 hours 43 minutes

(T) FACTORS OF ENDURANCE REMAINING

<u>Torpedoes</u>	<u>Fuel</u>	<u>Provisions</u>	<u>Personnel Factors</u>
16	22,610	20	

(U) REMARKS

1. Training

DECLASSIFIED

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

Advantage of every opportunity was taken in training the officers and men. A well oriented educational program was initiated at the beginning of the patrol in which all hands participated.

A total of twenty-five approaches were made by junior officers, five of which were firing runs.

We were well indoctrinated by the destroyers in ASW tactics.

The Simulated War Patrol still affords the best means of independent training after completion of a Shipyard overhaul. It gives the boat a chance to become a team once again after a long period of operational inactivity.

2. Liners - Fairbanks Morse Engines

This vessel has experienced twenty-five (25) liner failures (7 on this training patrol) since it was placed in commission April 3, 1944. During the shipyard overhaul of this vessel, 5 January - 19 May 1946, torsional vibration dampers were installed on all four main engines. Until this time there had been but one liner failure. It may be only a coincidence but the rest of the liner failures have occurred since that overhaul. It is thought that the installation of the torsional vibration dampers may have set up "criticals" in the range of continuous operating engine R.P.M. A failure occurred as early as 600 engine hours on a new liner. These failures have always occurred when the engine has been in continuous use for a period of over 24 hours. We have never experienced a failure under local operating conditions. The present water treatment prescribed by current doctrines has been religiously adhered to. Several failures have occurred in the vicinity of 1500 - 2000 hours. It is believed that an investigation should be made to determine if this theory has any basis to it.

3. Coolers - Main Engine Fresh Water - Salt Water - Harrison Type

A failure of this type cooler occurred during the Training Patrol and was repaired by ship's force. This cooler was tested in the Yard and met the required specification. It is believed that these coolers are not giving the service they should. This cooler failed after 1600 hours. The zincs installed were in good condition.

4. Photographic Reconnaissances

It has been the experience of this command on two training patrols that the day scheduled for photographic reconnaissance has been overcast and raining on one and a total overcast on the second. It is believed that at least two days should be allotted and the speed of advance arranged to accomplish this. It is felt that the importance of Photographic Reconnaissance warrants it.

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

5. Gyro Angle Solver (TDC side) Ordalt 2672

Ordalt 2672 (Dynamic Damping System) was installed to prevent oscillation in angle solver side of T.D.C. Adjustments are made by varying the resistances to two small induction motors. The present type resistances are of the tap-off type. It is believed that the substitution of variable resistors would permit a finer damping adjustment than now possible.

6. TBL Transmitter

The overload relay in the magnetic controller was unable to protect the equipment with a high battery charging voltage. When the relay opened the contact was locked shut. This condition left the supply fuses to protect the equipment. It is recommended that a resistance be installed in the circuit to drop the voltage to a near normal operating value during a battery charge.

7. WFA Power Sonar - Power Training

The heavy AC power load drawn when training the bottomside projector warrants the necessity of the WFA equipment having its own training motor generator. The surges caused by training which attain thirty to forty volts have seriously damaged the ship's IC motor generator voltage regulators. If this condition is prevalent amongst other submarines with similar equipment, it is recommended that an AC motor generator large enough to handle the WFA's training load be installed to isolate and prevent damaging other equipment.

8. Periscopes - Icing of Lenses

During operations in extremely cold conditions off Tsingtao, #2 periscope upper window iced over within a few seconds after exposure. It is recommended that due to similar operating conditions in contemplated operating areas of the future some method of preventing icing, with no deteriorating effect on the periscope, be initiated.

9. Rubber Tiling

During the last shipyard overhaul the rubber tiling installed in place of burlap backed linoleum, which was not available, proved very unsatisfactory. Moisture caused tiling to deteriorate and lift especially in the crew's dinette. The light color and rubber composition resulted in a dirty deck which required constant cleaning in order to look presentable. The grease and oil inherently present in a submarine makes the use of rubber tiling prohibitive.

10. Location of Periscopes

With the installation of the Mark IV TDC, the angle solver section has

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

been moved forward and now is abreast of #2 periscope. When using the attack periscope and when ready to fire the after part of the conning tower is so crowded that the assistant T.D.C. operator has little or no room and has quite a bit of difficulty in setting the spread.

The above could be eliminated by the interchange of #1 and #2 periscopes. During the first part of the approach when the ST is being used, the assistant T.D.C. operator can be out of the way during the observations. During the attack phase the forward scope (now #2) would thus be used and the assistant TDC operator would have access to the angle solver section without encroaching upon the Approach Officer.

11. 7 MC - Modification to

In operating with destroyers and planes in Tsingtao and Okinawa the need arose for direct communications between the bridge and the radio room. It is understood that the present 7 MC system would become overloaded with an extra outlet, so a modification to the system is recommended to compensate for the overload and allow for an outlet in the radio room.

12. ASW Evasive Devices

It is recommended that each submarine departing on a training patrol be furnished evasive devices such as FTS, Signal Pepper, NAE, NAC, NAG, NAH Beacons.

Some of the destroyers have practices which require the submarine to use evasive devices. Both the destroyers and submarines would benefit from their use, particularly the submarine in regards to (1) how to use them (2) when to use them and (3) tactics to be used in conjunction therewith.

13. Sanitary Tank Deodorant

The deodorizers now installed on the sanitary tank of submarines are woefully inefficient. This is aggravated by prolonged cruising where submarines are continually rigged for dive. This situation is not so readily discernible under local operating conditions where the ship returns to port and all hatches are opened upon arrival. It is realized that this is not a new subject matter, but the fact remains that this unsatisfactory conditions still exists.

14. Lens Paper

The type of lens paper being issued at the present time is a smooth and nonabsorbent material. It serves no useful purpose and it certainly does not meet the requirements for which purchased. It is recommended that lens paper

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

U.S.S. RAZORBACK (SS394) REPORT OF SECOND SIMULATED WAR PATROL

of the quality and texture of the commercial variety "Kleenex" be obtained for issue to submarines.

15. Food Consumption

During the first ninety (90) days of this Simulated War Patrol an accurate check of the foodstuffs used was made. Enclosure (E) is attached.

In comparing the food consumption of ninety days with that recommended by "Operation Plimsol", the only discrepancies noted were on flour, fresh beef and potatoes.

(a) Flour. One thousand (1000) lbs. of extra flour should be carried. It was found that the daily consumption of flour was forty (40) lbs.

(b) Fresh Beef. In our particular case we had opportunity to replenish our fresh supply at various stops during the patrol. During a regular war patrol this item would not have been so high, and would have been substituted for by the tinned meats aboard.

(c) Fresh Potatoes. This item falls in the same category as fresh beef. Other tinned items could be substituted.

(d) General Note. Approximately 40% of the tinned items of vegetables and fruits were left over after 90 days. It is considered that "Operation Plimsol"s list fulfills the desires for a ninety day war patrol with the exception of flour.

16. Savings Bonds.

The Savings Bonds' Officer held a drive to increase the number of those buying bonds by the allotment plan. The overall percentage now is seventy-three (73).

C-O-N-F-I-D-E-N-T-I-A-LPERISCOPE - PHOTOGRAPHIC RECONNAISSANCEYAP ISLAND

In accordance with SubPac Operation Order No. 28-47, the U.S.S. RAZORBACK was instructed to conduct a periscope - photographic reconnaissance of the East Coast of Gagil-Tomil Island between latitudes $9^{\circ}-31'$ N and $9^{\circ}-33'$ N.

RAZORBACK arrived off Yap Island at 2100 Item, 30 December. The reasons for arrival nine hours prior to sunrise were threefold:

- (1) To take soundings and gain hydrographic information in accordance with OpOrd and PacFlt Ltr. 55L-47.
- (2) To establish slope of outlying reef and determine to what range it could be safely approached.
- (3) To ascertain the current.

One run was made up and down the prescribed section, fathometer soundings being recorded at every fix. WPA ping ranges were taken on the reef and a good concept of what confronted us was derived. The current was found to be setting slightly towards the beach. The following course of action for the next day's photo survey was decided upon:

- (1) Dive and be in position for run up coast prior to sunrise. Since we were to reconnoiter the east side we had only the morning's sun at our back.
- (2) Make the run in two legs to conform to the bent arm shape of the island, the legs being parallel to the coast line.
- (3) Run at least 500 yards off the reef - that is, 500 yards at the level of the bottomside sound head. This was actually anywhere from 600 to 1200 yards from the reef at the surface.
- (4) Keep the range to the land between 2200 and 3000 yards.
- (5) Maintain the periscope on a true bearing normal to a line paralleling the coast.
- (6) Vary the interval between pictures depending on speed made good thru the water and range to the land, allowing for a sixty percent overlap on each picture taken. Fixes to be obtained every ten minutes to accurately determine speed, and ST radar used to precisely insure

correct range. A formula, $T = \frac{12R}{125S}$, where R = range in yards, was
 $T =$ time in seconds,
 $S =$ speed in knots,

derived and used to make up a graph for ready reference in controlling time between camera exposures.

- (7) Make at least three complete runs to guarantee thorough coverage and compensate for defective pictures.

DECLASSIFIED

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

PERISCOPE - PHOTOGRAPHIC RECONNAISSANCE

YAP ISLAND

The plan, however, could not be carried out in its entirety as the 31st proved to be almost completely overcast with intermittent rain squalls. This was very disappointing to us as we had come a long ways to take these pictures and had had perfect weather for the previous ten days. A practice submerged run was made while hopefully awaiting the sun's appearance. About 1015 Item conditions improved slightly and it was decided to go ahead as planned. Course had to be altered several times during the run due to the on setting current. As the run progressed weather conditions grew worse, so that the last few pictures were shot with extremely poor light conditions. A camera speed of 1/25th and lens opening of 6.3 were used.

With no prospects of the weather clearing up prior to noon it was decided to discontinue the reconnaissance and proceed to Okinawa.

EXPOSURE NO.	TRUE BEARING OF EXP.	DIS-TANCE TO THE BEACH	DIS-TANCE TO THE REEF	DEPTH OF WATER IN FATHOMS	S/M COURSE MADE GOOD	S/M SPEED MADE GOOD	S/M DEPTH	INTERVAL IN SEC.
15484	321°	2570	425	175	051°	3.3	53'	—
15485	321°	2560	450	150	051°	3.3	52'	82
15486	321°	2550	550	150	051°	3.3	51'	83
15487	321°	2520	600	160	051°	3.3	51'	80
15488	321°	2500	650	155	051°	3.3	50'	79
15489	321°	2460	675	175	051°	3.3	50'	91
15490	321°	2490	650	180	051°	3.3	49.5'	84
15491	321°	2410	650	180	051°	3.3	48'	80
15492	321°	2400	650	190	051°	3.3	50'	130
15493	321°	2400	600	190	051°	3.3	50'	70
15494	321°	2390	600	185	055°	3.3	50'	72
15495	321°	2370	550	190	055°	3.3	51'	73
15496	321°	2370	500	185	055°	3.3	50.5'	72
15497	321°	2390	475	180	055°	3.3	50'	70
15498	321°	2450	450	175	055°	3.3	50'	74
15499	321°	2470	425	180	055°	3.3	50'	74
15500	321°	2480	425	180	055°	3.3	51'	71
15501	321°	2490	425	200	055°	3.3	51'	71
15502	321°	2500	425	170	055°	3.3	49.5'	72
15503	321°	2520	400	180	055°	3.3	51'	73
15504	286°	3000	725	240	016°	3.3	51.5'	—
15505	286°	3010	750	230	016°	3.3	50'	81
15506	286°	3010	750	250	016°	3.3	50'	90

DECLASSIFIED

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

PERISCOPE - PHOTOGRAPHIC RECONNAISSANCE

YAP ISLAND

EXPOSURE NO.	TRUE BEARING OF EXP.	DIS-TANCE TO THE BEACH	DIS-TANCE TO THE REEF	DEPTH OF WATER IN FATHOMS	S/M COURSE MADE GOOD	S/M SPEED MADE GOOD	S/M DEPTH	INTERVAL IN SEC.
15507	286°	3010	725	220	016°	3.3	51'	91
15508	286°	3030	725	210	016°	3.3	50'	88
15509	286°	3040	700	220	016°	3.3	50'	77
15510	286°	3070	675	200	016°	3.3	48'	75
15511	286°	3020	600	210	016°	3.3	52'	83
15512	286°	2950	600	240	016°	3.3	49.5'	81
15513	286°	2890	550	210	016°	3.3	50'	81
15514	286°	2825	500	160	016°	3.3	49'	83
15515	286°	2800	475	152	016°	3.3	49'	81
15516	286°	2770	475	150	016°	3.3	50'	80
15517	286°	2740	450	135	016°	3.3	49'	80
15518	286°	2735	425	125	016°	3.3	50'	77
15519	286°	2720	400	120	016°	3.3	50'	75
15520	286°	2720	375	150	016°	3.3	49'	75
15521	286°	2720	350	115	016°	3.3	51'	78
15522	286°	2720	375	120	016°	3.3	50'	78
15523	286°	2720	375	123	016°	3.3	50'	70
15524	286°	2730	375	120	016°	3.3	49.5'	75
15525	286°	2730	400	115	016°	3.3	50'	73
15526	286°	2740	425	125	016°	3.3	49.5'	73

Aperture Opening f6.3
 Exposure Time 1/25 sec.

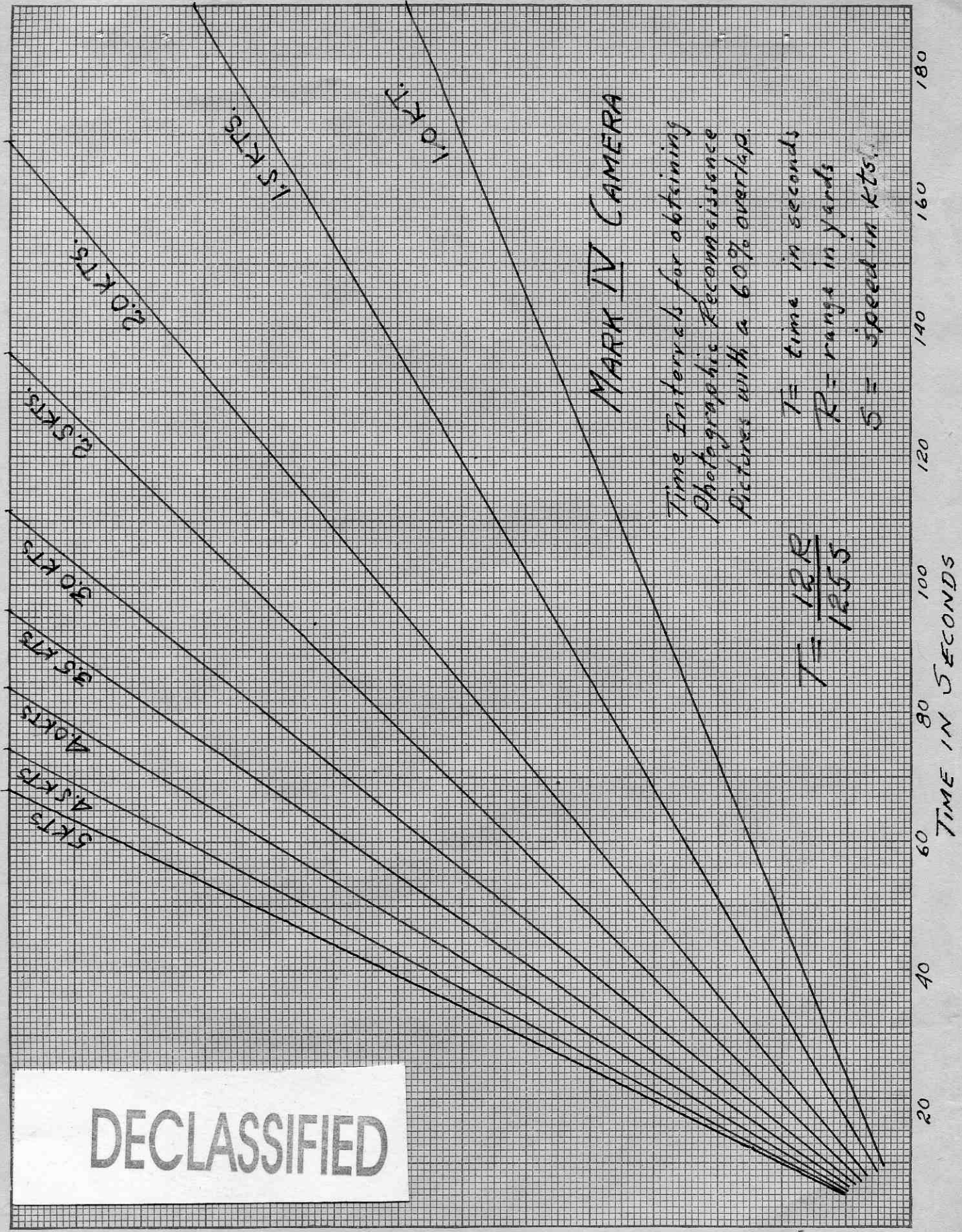
First Leg, Exposure Nos. 15484 to 15503, commenced run at 1025:16 Item.

Second Leg, Exposure Nos. 15504 to 15526, commenced run at 1104:36 Item.

DECLASSIFIED

DR. No. 10-21369-1

Distance to the Beach in Yards



DEPARTMENT OF THE NAVY
BUREAU OF THE
NAVSUP (00)

FOOD CONSUMED DURING 90 DAYS (73 MEN)

Bread

Bread, fresh loaves	150	lbs.
Bread, Brown, tinned	390	lbs.
Crackers, carton	244	lbs.
Corn Meal, tinned	12	lbs.
Corneal, tinned	12	lbs.
Farina	12	lbs.
Flour, Wheat	3450	lbs.
Flour, Buckwheat	10	lbs.
Flour, Graham	100	lbs.

Meat, Preserved, Tinned

Bacon, tinned	86	lbs.
Beef, Corned	30	lbs.
Beef, Corn Hash	30	lbs.
Clams	5	lbs.
Ham, tinned	38	lbs.
Lunchmeat	40	lbs.
Salmon	40	lbs.
Sardines	60	lbs.
Sausage, Salami	35	lbs.
Sausage, Vienna	4	lbs.
scrapple	35	lbs.
Tuna	50	lbs.
Turkey, tinned	61	lbs.

Meat, Smoked

Bacon, S.P.	145	lbs.
Ham, S.P.	481	lbs.
Sausage, Bologna	23	lbs.
Sausage, Frankfurters	65	lbs.
Sausage, Liver	25	lbs.

Meats, Fresh

Chicken	313	lbs.
Beef, Boneless	3400	lbs.
Fish, F.F.	53	lbs.
Lamb	280	lbs.
Liver Beef	147	lbs.
Oysters, Q.F.	5	gals.
Pork Loin	780	lbs.
Pork Sausage	35	lbs.
Shrimp, Q.F.	20	lbs.
Turkey	350	lbs.
Veal	141	lbs.

Vegetables, Dry

Beans, Lima	50	lbs.
Beans, Kidney	50	lbs.
Beans, Navy	100	lbs.

Vegetables, Tinned

Asparagus	162	lbs.
Beans, Baked	169	lbs.
Beans, Kidney	139	lbs.
Beans, Lima	86	lbs.
Beans, String	210	lbs.
Beets	86	lbs.
Carrotts	117	lbs.
Corn	179	lbs.
Peas	239	lbs.
Potatoes, Sweet	68	lbs.
Pumpkin	288	lbs.
Sauerkraut	54	lbs.
Spinach	111	lbs.
Tomatoes	438	lbs.

Vegetables, Fresh

Cabbage	200	lbs.
Carrotts	100	lbs.
Celery	190	lbs.
Lettuce	172	lbs.
Onions, Dry	441	lbs.
Potatoes, Irish	4500	lbs.
Tomatoes	60	lbs.

Vegetables, Fresh Frozen

Asparagus	25	lbs.
Beans, Lima	60	lbs.
Beans, String	25	lbs.
Calliflower	20	lbs.
Brussel sprouts	8	lbs.
Corn	123	lbs.
Peas	50	lbs.
Spinach	20	lbs.
Peaches, F.F.	60	lbs.

Fruit Dried

Cocoanut, Prepared	36	lbs.
Raisins, Dry	40	lbs.

DECLASSIFIED

FOOD CONSUMED DURING 90 DAYS (73 MEN)

Fruits, Tinned

Apples	72	lbs.
Apricots	160	lbs.
Cherries	36	lbs.
Figs	48	lbs.
Grapefruit	90	lbs.
Fruit Cocktail	50	lbs.
Peaches	180	lbs.
Pears	191	lbs.
Pineapple	197	lbs.
Prunes	38	lbs.
Blackberries	76	lbs.
Blueberries	109	lbs.

Juices

Grapefruit	40	qts.
Orange	56	qts.
Pineapple	28	qts.
Lemon Powder	22	lbs.

Fruits, Preserved

Jams & Jellies	456	lbs.
Applesauce	45	lbs.
Applebutter	36	lbs.
Mincemeat	70	lbs.

Fruits, Fresh

Apples	803	lbs.
Grapefruit	75	lbs.
Lemons	136	lbs.
Oranges	875	lbs.

Beverages

Cocoa RY	10	lbs.
Cocoa SW	160	lbs.
Coffee, Tinned	480	lbs.
Tea, Bulk	30	lbs.

Milk

Milk, Fresh	80	gals.
Milk, Evaporated	1600	lbs.
Milk, Whole pd.	60	lbs.

Butter, Fresh	650	lbs.
---------------	-----	------

Cereals

Cereal, Prepared	18	lbs.
Cornstarch	22	lbs.
Macaroni	35	lbs.
Noodles, Egg	40	lbs.
Oats, Rolled	5	lbs.
Rice, White	125	lbs.
Spaghetti	80	lbs.

Cheese

Cheese, Brick	44	lbs.
Cheese, Cheddar	54	lbs.

Eggs, Fresh

	736	doz.
--	-----	------

Shortening, Vegetable

	464	lbs.
--	-----	------

Oils & Sauces

Catsup, Tomato	30	gals.
Salad Oil	15	gals.
Steak Sauce	30	lbs.
Soya Sauce	8	qts.
Tobasco Sauce	30	Btls.
Worcestershire Sauce	6	qts.
Vinegar	16	qts.

Sugar

Sugar, Brown	40	lbs.
Sugar, Granulated	1720	lbs.
Sugar, Powdered	80	lbs.

Accessories

Baking Powder	25	lbs.
Baking Soda	24	lbs.
Chile Powder	1	lb.
Flavor, Vanilla	1	qt.
Mustard, Dry	1	lb.
Pepper, Black	14	lbs.
Pickles, Chew	5	lbs.
Pickles, Sour	53	lbs.
Pickles, Dill	52	lbs.
Pickles, Sweet	31	lbs.
Salt, Table	145	lbs.
Spices, Assorted	10	lbs.
Cinnamon	9	lbs.
Syrup, Cane	146	lbs.
Syrup, Maple	60	lbs.

DECLASSIFIED

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

FOOD CONSUMED DURING 90 DAYS (73 MEN)

Miscellaneous

Boullion Cubes	20	lbs.
Dessert, starch	80	lbs.
Avoset	44	qts.
Mustard, Prepared	20	qts.
Mayonnaise	16	qts.
Meringue Powder	10	lbs.
Mushrooms, Tinned	40	lbs.
Honey	26	lbs.
Ice Cream, Powdered	150	lbs.
Olives, Green	80	lbs.
Olives, Ripe	143	lbs.
Peanut, Butter	100	lbs.
Shrimp, Tinned	56	lbs.
Soups, Tinned	65	lbs.
Tomato Paste	159	cans.
Bone Stock	4	lbs.
Arkady	10	lbs.
Celery salt	5	lbs.
Chile con Carne	14	lbs.
Candy	16	lbs.
Walnuts	30	lbs.
Pecans	30	lbs.

DECLASSIFIED

DECLASSIFIED

ROUTING SCALE
14ND-SubFor-4 (Rev. 10-21-47)
PH-10-24-47-15M-5750

FF12-10/A16-3/WP

COMMANDER SUBMARINE FORCE
UNITED STATES PACIFIC FLEET

dn

Serial 0238

Care of Fleet Post Office,
San Francisco, California,

CONFIDENTIAL

27 MAY 1948

THIRD ENDORSEMENT to
CO RAZORBACK Conf SS394/
A4-3 Ser 010 of 2-28-48.

From: Commander Submarine Force, U.S. Pacific Fleet.
To : Chief of Naval Operations.
Via : Commander in Chief, U.S. Pacific Fleet.

Subject: U.S.S. RAZORBACK (SS394) - Second Simulated War Patrol - Report of.

1. Forwarded less enclosures (B) and (C).

2. The following remarks pertain to comments and recommendations made in the basic report.

(a) (U)(2)(Page 69). Liners - Fairbanks Morse Engines.
Concur with the second endorsement.

(b) (U)(4)(Page 69). Photographic Reconnaissance.
The photographic reconnaissance is scheduled primarily for training in this mission, and not for the value of the intelligence information that may be obtained. If weather conditions prevent making the scheduled reconnaissance, this training should be obtained later in local areas rather than prolong the patrol to ensure a good day for this work.

(c) (U)(5)(Page 70). Gyre Angle Solver (TDC Side) ORDALT 2672.
The substitution of variable resistors for present tap-off resistors in the TDC dampening system is recommended for consideration by BuOrd. It is also recommended that a change or supplement to OP 1442 be issued which will give sufficient information to operating and maintenance personnel concerning Ordalt 2672.

(d) (U)(6)(Page 70). TBL Transmitter.
Concur with the second endorsement.

(e) (U)(7)(Page 70). WFA Power Sonar - Power Training.
Do not concur. The provision of the retractable dome mechanism now under development for WFA-1 equipment will eliminate this difficulty.

(f) (U)(8)(Page 70). Periscopes - Icing of Lenses.
Concur in the desirability of some method of reduction in icing over of high angle periscope upper window.

00
01
05
08
10
11
15
20
30
33
34
35
40
60
61
70
71
75
76
90

FF12-10/A16-3/WP

COMMANDER SUBMARINE FORCE
UNITED STATES PACIFIC FLEET

dn

Serial 0238

Care of Fleet Post Office,
San Francisco, California,

CONFIDENTIAL

THIRD ENDORSEMENT to
CO RAZORBACK Conf SS394/
A4-3 Ser 010 of 2-28-48.

27 MAY 1948

Subject: U.S.S. RAZORBACK (SS394) - Second Simulated War Patrol - Report of

(g) (U)(9)(Page 70). Rubber Tiling.

The rubber tiling was installed in the RAZORBACK in lieu of linoleum due to shortage of that material. Further use of the rubber tiling is not contemplated if the supply of linoleum is adequate.

(h) (U)(10)(Page 70). Location of Periscopes.

Concur with first endorsement.

(i) (U)(11)(Page 71). 7MC - Modification to.

Do not concur. With the present design of 7MC and present usage, the addition of an outlet in the radio room would result in an unacceptable high noise level in that space.

(j) (U)(12)(Page 71). ASW Evasive Devices.

An allowance list for submarine evasion devices was recently promulgated, and currently available types of these devices are now being distributed. Allowances were assigned to Squadrons for distribution at the discretion of Squadron Commanders for use in training, evaluation, development of tactics, leading on simulated war patrols, and for war reserve.

(k) (U)(13)(Page 71). Sanitary Tank Deodorant.

New design of activated charcoal filters that are presently under development and test should improve this condition.

(l) (U)(14)(Page 71). Lens Paper.

Concur with second endorsement.

3. This patrol was outstanding in the excellence of planning and execution of a very thorough and valuable training program.

4. The Commanding Officer, officers and crew of the RAZORBACK are congratulated on the successful completion of this long and fruitful training patrol.

DISTRIBUTION:

SUBPAC X-33, Case 3.

SPECIAL:

CNO (8), Hydrographer (1),
BuShips (5), BuOrd (5), BuDecks(2),
BuMed (2), BuSanda (2), CinCPacFlt (5),
ComSubLant (17), ComNavWesPac (1),
ComNavFE (1), ComMarianas(2),
ComNavPhil (2), ONR (5), NavAcad (2),
S/mScol NL (2).

A. R. McCann
A. R. McCANN.

DECLASSIFIED

00
01
05
08
10
11
15
20
30
33
34
35
40
60
61
70
71
75
76
90

73
P/B