

U.S.S. RAZORBACK (SS 394)

Care of Fleet Post Office,
San Francisco, California.
2 June 1946.

R E S T R I C T E D

From: The Commanding Officer.
To : The Commander Submarine Force, Pacific Fleet.
Via : (1) The Commander Submarine Division TWELVE.
(2) The Commander Submarine Squadron ONE.

Subject: U.S.S. RAZORBACK (SS 394) Simulated War Patrol
Number ONE - report of.

Enclosure: (A) Subject Report.
(B) Track Chart.
MISSING { (C) Chart and roll of film of JOHNSON ISLAND.
(D) Six rolls of film and soundings of NAURU ISLAND,
etc.

1. Enclosure (A) covering the first simulated war patrol of this vessel conducted through the MARSHALL, CAROLINE and NAURU ISLAND during the period of 13 May - 2 June 1946 is forwarded herewith.

L. A. Lajannie, Jr.
L.A. LAJANNIE, Jr.

Com Sub Force Box #301069 RS #
L.A. Lajannie, Jr.
SECRET #

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U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(A)

PROLOGUE:

The U.S.S. RAZORBACK (SS 394) arrived PEARL HARBOR for a general overhaul during the period of 5 January to 22 April 1946. The main battery's electrolyte was renewed twice to lower the perchlorate content to within the allowable limits during the period 29 April to 6 May and was performed by the U.S. SUBMARINE BASE, PEARL. The following major alterations were completed during the overhaul: Installation hydraulic periscope, Mark IV TDC, Mark 11 TBT, Mark 7 Mod 1 DRT in control room; modify diving alarm system to incorporate emergency D.C. supply, modify heat exchanger in 1000 G.P.D. distilling plant, replace main ballast tank vent valve bell cranks; installation of SV radar; permanent propeller and stern plane guards; modification of general announcing system and Submarine control announcing system; installation AN/SPR-1, SCR-624-A VHF; installation of JT sonar equipment, NGA fathometer, fixed dome on QB sound head; two 5"/25 caliber Mark 40 wet type guns, two 40mm mounts, guns and ammunition stowage

Received eight days training, two days of which a target was available for approaches. Captain E.J. MAC GREGOR Commander Submarine Division TWELVE came out with us on one of these training days. No torpedoes were fired.

(B)

NARRATIVE

The Following officers and men were aboard this vessel during the period of this simulated War Patrol.

<u>Rank</u>	<u>OFFICERS</u> <u>Name</u>	<u>Classification.</u>
Commander	L.A. LAJAUNIE, Jr.	U.S. Navy
Lt. Commander	P.A. NEWLOVE	U.S.N.R. (DE)
Lt(jg)	W.H. PATTILLO	U.S.N.R. (DE)
Lt(jg)	F.E. FARRIS	U.S. Navy
Lt(jg)	H.J. TRUEBLOOD	U.S. Navy
Lt(jg)	J.E. BONDS	U.S. Navy
Ensign	J.R. JOHNSON	U.S. Navy

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(B) NARRATIVE: (Con't)

ENLISTED PERSONNEL

<u>Name</u>	<u>Rate</u>	<u>Service No.</u>
ADE, Emil (n)	CTM	328 46 26
ANDERSON, Lawritz E.	MoMM2c	329 41 96
BABAUTA, Serafin C.	Stlc	421 03 65
BAJEMA, Paul M.	CPhM(AA)	285 96 05
BANKER, Robert K.	MoMM2c	371 85 01
BOYA, Richard N., Jr.	Slc(RM)	307 46 17
BOYANTON, Eugene D.	F1c	263 68 ^b 98
BRINK, Ernest B.	Y2c	312 36 62
CALDWELL, Charles R.	MoMM3c	280 10 54
CARLSON, Eugene O.	EM3c	393 79 11
CAROTHERS, Charles G.	TM2c	865 93 99
CORBELL, Rodolph N.	RM3c	205 70 11
COWANS, Lawrence (n)	StM1c	946 84 46
FEDOR, Robert C.	EM1c	323 93 77
FONSECA, Aristides H.	FCS2c	201 79 37
FOUGHT, Robert E.	Slc	285 74 45
FURIO, Paul D.	EM3c	250 88 84
GERMAINE, Allen M.	MoMM2c	555 93 05
GERRARD, Victor H.	MoMM3c	877 95 91
GERRY, John W.	TM2c	868 44 72
GIBSON, George F.	RM1c	321 50 24
GILLILAND, David H.	Slc	301 20 77
GUIDRY, Calvin J.	SM1c	407 70 62
HALEY, Eugene J.	S2c	225 76 69
HAMMETT, George C.	TM1c	225 19 66
HENDRICKSON, John S.	Slc	386 77 90
HNATOWICZ, Michael J.	QM1c	224 01 87
HOWARD, Gary E.	S2c	344 11 07
HULBURT, Harlow R.	TM3c	393 81 47
HUNTER, Lawrence R.	ETM2c	884 87 09
HUOT, Joseph (n)	S2c	798 3 7 51
JACKSON, Raymond S.	MoMM1c	382 31 85
JANNIRO, Giovanni (n) Jr.	CTM	223 27 71
JARVIS, Clarence C.	GM2c	342 65 20
JOHNSON, Earle E.	MoMM1c	859 12 81
JOHNSON, Lawrence B.	Slc	329 43 31
JONES, Lewis S.	TM1c	556 31 99
JONES, Ralph N.	Slc	557 08 68
KIRKHUFF, Robert C.	Slc	371 95 94
KROLL, Christopher J.	GM1c	223 83 58
LEWIS, Phillip A.	EM2c	660 70 58
HARRELL, Willie B.	MoMM2c	263 60: 29

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(B) NARRATIVE (Con'd)

<u>Name</u>	<u>ENLISTED PERSONNEL</u>	<u>Rate</u>	<u>Service No.</u>
MAC GREGOR, Norman (n)		Slc	224 62 64
MAVIGLIA, Frank A.		EMlc	225 39 06
MC CARTHY, Peter E.		SC2c	250 78 79
MC GOOGAN, Albert C.		TME3c	857 05 77
MC LAUGHLIN, Paul F.		MoMlc	201 60 29
MEHALICK, Joseph (n)		CMOMM(AA)	258 34 28
MILLER, Jason A.		Bkr2c	762 08 70
MOORE, Oscar H.		StMlc	970 64 43
MORRISSEY, Robert W.		MoMlc	225 25 54
MOUNT, Raymond B.		SoM3c	225 48 08
NICOLAS, Alexis R., Jr.		S2c	790 01 06
NILSON, Roy T.		Flc	225 62 88
PEUGH, John W.		QM2c	570 30 33
PIAZZA, Peter (n)		CMOMM	207 12 18
QUIGLEY, Charles D.		EM2c	382 31 38
RAY, Valton L.		Slc	264 31 18
REED, Joseph S. Jr.,		S2c(GM)	582 30 98
ROCHESTER, Albert F.		CEM	262 28 22
ROESCH, William B.		QM3c	810 27 43
SCANLAN, Fronk L.		EMlc	372 19 93
SHANNON, Richard L.		TM3o	283 65 25
SMALL, James A.		Flc	360 34 89
SPENCER, Robert V.		CEM	337 57 05
ST CLAIR, Mearl M.		TMlc	393 54 31
SWEIGARD, William C.		MoMlc	243 99 14
STEWART, John H.		CCS	414 34 18
WARD, Lowell, D.		Slc(RM)	329 65 00

13 May 1946:

1500 WY Underway from berth S-5, U.S. SUBMARINE BASE, PEARL HARBOR, in accordance with CTF 17.4 Restricted OpOrd No. 5-46 of 13 May 1946 for simulated War Patrol enroute GUAM. Speed of advance is 12 knots.

1630 WY Set course for JOHNSON ISLAND, 80 - 90 on two main engines.

1710 WX Made trim dive.

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(B) NARRATIVE (Con'd)

14 May 1946:

- 0215 WX SJ Radar contact 246°T. range 28,600 yards. This ship was an AP tracked on course 260°T speed 13 knots.
- 0642 WX Made training dive.
- 0835 WX Sighted plane bearing 072°T. distance 8 miles. Identified as Martin Mars.
- 0900 WX Set clocks back $\frac{1}{2}$ hour to plus 11 zone time.
- 1053 X Sighted plane bearing 142°T distance 8 miles. Identified as C-54.
- 1200 X Position - Lat. 19°-33'N. Long. 162°-14' W.
- 1403 X Made training dive.
- Used SV for night search.
- 2110 X Transmitted RAZORBACK's first to CSP.

15 May 1946:

- 0628 X Made training dive.
- 1035 X Made training dive.
- 1200 X Position - Lat. 18°-08' N. Long. 167°-18' W.
- 1447 X Made training dive. Held battle problem, went deep and rigged for depth charge and silent running. Problem was run from an auxiliary plot in Wardroom so that a simulated approach could be made.

Approaching a point due north of JOHNSON distance 25 miles, Radars were not manned so as to prevent DF'ing. The RCM gear was manned at sunset and throughout the night.

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(B) NARRATIVE (Con'd)

15 May 1946:

2120 X Transmitted RAZORBACK's Second to ComSubPac.
2330 X APR contact on 112 megacycles - 275 - 300 prs
Strength 5. At this time we were 40 miles from JOHNSON.

16 May 1946:

0200 X. Changed course to 180° approaching JOHNSON ISLAND
0345 X Sighted two white and one red light bearing 170°T.
distance 16 miles - JOHNSON ISLAND.
0450 X Heard aviators talking over APR; C-54 is about to land.
0512 X Submerged six miles from JOHNSON ISLAND, closing coast.
0545 X Paralleled coast line to observe air traffic at a dis-
tance of 5000 yards; C-54 transport took off going east.
0630 X C-54 landed from West.
0643 X B-26 took off going East.
0658 X B-29 took off going East and C-54 going West.
0705 X C-54 landed from West.
0710 X C-54 took off going East.
0734 X C-54 took off going East.
0740 X B-29 took off - destination not determined.
0750 X C-54 landed from West.
0815 X LCM's 420, 488, and 319 passed ahead 2,000 yards
heading for JOHNSON ISLAND.
0842 X C-54 took off going East.

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(B) NARRATIVE:(Con'd)

16 May 1946:

0844 X C-54 landed from West.
0937 X C-54 landed form West.
0938 X PBY equipped with wheels took off and for the next hour and a half made many takeoffs and landings.
1000 X C-54 took off heading East.
1035 X C-54 landed from East.
1043 X "Helldiver" sighted flying; did not see landing or take-off
1050 X Cruman "GOOSE" sighted circling island.
1119 X C-54 landed from East.
1153 X C-54 landed from West.
1200 X Position - Lat. 16°-47'N. Long. 169°-35' W.
1221 X C-54 landed from West.
1312 X C-54 landed from West.
1319 X PBM sighted circling.
1351 X Heading for coastline to take pictures of JOHNSON ISLAND. (See plot of enclosure).
1500 X C-54 landed, direction of approach not determined.
1520 X SB2C circling over Island.
1604 X C-54 took off heading East.
1644 X PBM took off and landed.
1700 X C-54 took off heading West.

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(B) NARRATIVE (Con'd)

16 May 1946:

1720 X C-54 landed from East. Set course to open Island to Westward.

1843 X Surfaced and set course to KWAJALEIN ATOLL.

2300 X Transmitted RAZORBACK's Third to ComSubPac.

17 May 1946:

0300 X Plane contact on SV radar bearing 175°T distance 35,000 yards.

0638 X Made training dive.

1023 X Made training dive.

1200 X Position - Lat. 15°-10' N. Long. 173°-05'W.

1400 X Set clocks back one hour to conform with plus 12 zone time.

1431 Y Submerged. Held battle problem - went deep, rigged for depth charge and silent running. Exercised at "Hovering" trim manifold operator received a good workout for about fifteen minutes, then the diving officer got the hang of it and things simmered down to what they should be.

2055 Y Transmitted RAZORBACK's Fourth to ComSubPac.

18 May 1946:

0640 Y Made training dive.

1030 Y Made training dive.

1200 Y Position - Lat. 13°-01 N. Long. 177°-05' W.

1435 Y Made training dive. Simulated fire in control cubicle as we passed 49 feet. All stop, exercised at "Hovering" for one half hour.

2030 Y Transmitted RAZORBACK's Fifth to ComSubPac. Crossed date line.

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(B) NARRATIVE (CO'n'd)

20 May 1946:

0635 Y Made training dive.
1042 Y Made training Dive.
1200 Y Position - Lat. 13°-01' N. Long. 177°-37' E.
1514 Y Made training dive. Held battle problem, went deep, rigged for depth charge and silent running.
1647 Y Exercised 5" and 40mm gun crews at manning their stations.

21 May 1946:

0637 Y Made training dive.
1010 Y Exercised 5" and 40mm gun crew - pointing drill.
1055 Y Made training dive.
1200 Y Position - Lat. 08°-47' N. Long. 173-00' E.
1500 Y Made training dive.
1550 Y Slowed to 1 main engine as we were ahead of schedule.
1800 Y Manned RCM gear throughout the night. No signals were picked up as we approached and passed South of MALO-EAP ATOLL, distance 21 miles.
2045 Y Transmitted RAZORBACK's Seventh to ComSubPac and ETA to KWAJALEIN ATOLL.

22 May 1946:

0100 Y Set clocks back one hour to -11 zone time.
0120 L SV contact on land bearing 005°T. distance 42,000 yards AUR ATOLL.
0625 L Made training dive.

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(B) NARRATIVE (Con'd)

22 May 1946:

1010 L Pointer drills for 5" and 40mm gun crew.
1042 L Made training dive.
1142 L Sighted aircraft, C-54 bearing 206°T distance 10 miles.
1200 L Position - Lat. 08°-40'N. Long. 169°-16' E.
1412 L Made training dive. Held battle problem, Held battle surface.
2015 L Transmitted RAZORBACK's Eighth to ComSubPac.
2153 L SW radar contacted ROI ISLAND bearing 265°T. range 47,500 yards.

23 May 1946:

0246 L Approaching MEILU PASS on course 195°, range to ROI ISLAND 29,000 yards.
0500 L Tried to contact HECF (There isn't any. Tower is deserted.)
0500 L Having tried for an hour to contact someone, decided to enter.
0615 L Passed entrance buoys.
0650 L Finally contacted ROI ISLAND who asked where were we going. Told him and that apparently satisfied everybody.
0656 L Entered ROI-KWAJALEIN HIGHWAY channel. Increased speed to four main engines. See navigational data for further information.
0936 L Anchored in Berth King Twenty, KWAJALEIN ISLAND ANCHORAGE.
1000 L Thumbed a ride to the Atoll where I called on Commander LANIER, Commander Naval Base and Commadore WYATT, Atoll Commander and Commander Naval Air Base.

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(B) NARRATIVE (Con'd)

23 May 1946:

1000L(Con't) They were very helpful, and accomodating in all respects. Opened the beer hall in the afternoon for two sections. Commodore WYATT was very surprised when we didn't want anything. He said the only ships that stopped here were those who desired something.

1715 L Underway to GEA PASS.

1810 L Clear of GEA PASS.

1820 L Set course for NAURU ISLAND.

2035 L Passed LIB ISLAND abeam to starboard, 8 miles.

24 May 1946:

1007 L Made training dive.

1200 L Position - Lat. 05°-11'N. Long. 167°-18' E.

1205 L Sighted buoy 20° off starboard bow, believed at first to be a mine. Sank buoy with .50 cal. machine gun.

1550 L Made training dive.

1730 L Converted #4 FBT to MBT.

1745 L Davey Jones came aboard with greetings from Neptunus REX.

25 May 1946:

0637 L Made training dive. Exercised at battle stations, chlorine and collision drills.

0839 L Sighted Privateer bearing 045°T. distance 7 miles.

1200 L Position - Lat. 00°-03' N. Long. 166°-55' E.

1227 L King NEPTUNE and Royal Family came aboard and initiated all Pollywogs.

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(B) NARRATIVE (Con'd)

25 May 1946:

1845 L SV contact on NAURU ISLAND bearing 194°T. distance 23 Miles.
All charts that were available did not have any soundings so a survey was made first between 7,000 - 9,000 yards around the island. After this we headed for the shore at one-third speed, partially flooded down taking continuous soundings. At 5,000 yards soundings were over 1,000 fathoms. The weather was squally having intermittent cloud bursts throughout the night.

For the purpose of taking photographs it was decided to start with the south east corner of the Island going clockwise, then by having the sun in back of us throughout the day.

2130 L Transmitted RAZORBACK's Tenth to ComSubPac.

26 May 1946:

0545 L Submerged to conduct photographic reconnaissance of NAURU ISLAND 9,000 yards distant from the Eastern side of the Island. The sky was completely overcast and many rainsqualls were in the vicinity. The photographic mission seemed doomed from the very first. However, a periscope reconnaissance was made with the conning officer writing down all he could see. From the previous night's survey of soundings we felt that the shore line could be approached to 4,000 yards without too much trouble. From the results of today's submerged run around the island and with the soundings obtained it is felt that the shore line could be closed to 2,000 yards with safety. Had we another day in the vicinity a reconnaissance from 2000 yards would have been made.

Immediately after submerging and several fixes were obtained it was determined that a speed greater than 2.2 knots (1/3 speed) would have to be used. Two-third speed was used and the approach to the southeasterly shoreline of the Island started. Soundings were taken continuously and were plotted on the chart.

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(B) NARRATIVE (Con'd)

The whole of the island is covered with heavy green foliage and very unlike the Islands of the MARSHALL group. It is somewhat hilly and has little, if any, beach. There appears to be some sort of road along the shore line, the type of construction is not known. Fixes were easily obtainable by tangents as they are clearly defined by shear drops. The Eastern side of the island seems to be sparsely settled. There were two small buildings, presumably the Leper's station. The south side of the Island going clockwise through the Western and Northwestern section is populated as determined by the many domiciles of varying types of construction. There is a small town on the Western side of the island.

The following data was obtained at Lat. $00^{\circ}23'20''$ S. and Long. $166^{\circ}54'50''$ E. The data is described from East to West.

The beach appeared to be a narrow strip of sand with very little surf. The Island itself appeared to rise distinctly out of the ocean to an elevation of 10 feet near the water's edge and taper up to a mesa-like plateau with no distinct hills to an elevation of approximately 160 feet. At Olsen's there is a radio tower-like structure near a lodge type building about 200 yards from the beach. Approximately half way to the beach and to west of Olsens there are 10 - 20 huts.

A white building, thought to be a hospital, is located just North of YARREM. A lookout tower on a hill is just northeast of this white building. North of this building is a small water reservoir on a hill. West of the hospital is a structure with a red roof; possibly a municipal building. West of this, on oil storage tank. Next is a small ore loading trestle. To the southwest

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(B) NARRATIVE (Con'd)

26 May 1946:

of the trestle are two large ore loading trestles for ships. These trestles are large cantilever type structures with sturdy concrete foundations indicating some type of minning establishment. Directly behind the trestle is a large building with 2 sixty foot stacks. Just north of the two ore loading trestles is a lightly constructed pier extending approximately the same length. In the water are pilings that once formed part of a finger pier.

Periscope observation of NAURU ISLAND from the west position Lat. $00^{\circ}-20'-00''$ S. Long. $166^{\circ}-53'-00''$ E.

The topographical features of NAURU from the above position are the same as from the southern position. Looking from south to north starting with the trestles the following data was observed. There is a large cathedral type building. To the North of the cathedral is a barracks area geometrically laid out in checkerboard fashion. The barracks are one-story wood construction of about 50 - 60 in number. No parade ground could be seen. East and adjacent to Barrack's area on a sloping hill is a large stone building, possibly an administration building. The shoreline northeast of the barracks area is densely covered with vegetation. Along this area there are a few small huts.

It was necessary to depart from the procedure laid down in Training Instructions because of the bad weather and strong current. Pictures were taken when it was thought justifiable to do so and as quickly as possible.

0940 L Took pictures, (Roll #1) although weather was overcast.
1200 L Position - Lat. $00^{\circ}-34'$ S. Long. $166^{\circ}-54'$ E.
1216 L Took pictures, Roll #2.

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(B) NARRATIVE (Con'd)
26 May 1946:
1417 L Took pictures, Roll #3
1530 L Took Pictures, Roll #4
1636 L Took pictures, Roll #5

A chart has been made showing position and true bearing of all pictures taken. This chart will be an enclosure to patrol report.

1819 L Surfaced.
1830 L Took pictures of SV radar.
2100 L Transmitted RAZORBACK's Eleventh to ComSubPac.

27 May 1946:

0636 L Made training dive.
1010 L Pointer drill.
1038 L Made training dive.
1200 L Position - Lat. $01^{\circ}-26'$ N. Long. $164^{\circ}-20'$ E.
1532 L Made training dive. Held battle problem, went deep rigged for depth charge and silent running.
2100 L Transmitted RAZORBACK'S Twelfth to ComSubPac.

28 May 1946:

0655 L Made training dive.
1010 L Pointer drill.
1200 L Position - Lat. $03^{\circ}-40'$ N. Long. $159^{\circ}-40'$ E.
1526 L Made training dive.
2025 L Transmitted RAZORBACK's Thirteenth to ComSubPac and ETA to TRUK.

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29 May 1946:

0800 L Field Day.
1042 L Made training dive.
1200 L Position - Lat. 05°-48' N. Long. 154°-56' E.
1502 L Made training dive.
1700 L Fired 26 rounds of 40mm at homemade target.
2040 L Transmitted RAZORBACK's Fourteenth to ComSubPac.

30 May 1946:

0105 L SV radar contact 310°T., distance 78,000 yards -
MOEN ISLAND.
0608 L Entered North East Pass and pilot came aboard.
0759 L Anchored West of MOEN ISLAND 1½ miles offshore in 13
fathoms of water. Called on Captain GILBERT of Naval
Air Base. All courtesies possible were given us and
an enjoyable stay was had by all hands.

31 May 1946:

1207 L Underway for GUAM via North East Pass. The North pass
is not yet clear of mines.
2035 L SV contact on PISARES ISLAND, bearing 234°T., range
46,000 yards.
2040 L SV contact on ONO ISLAND, bearing 260°T., range 44,000
yards.

1 June 1946:

0656 L Made training dive.
1010 L Pointer drill.
1040 L Made training dive.
1200 L Position - Lat. 11°-00' N. Long. 146°-41' E.

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1 June 1946:

1224 L Sighted "Privateer" bearing 328°T., distance 7 miles.
1300 L Sighted "Privateer" bearing 025°T., distance 10 miles.
1508 L Made training dive.
1620 L Sighted PB-1 Venture 340°T. circling us.
1643 L Sighted "Privateer" 270°T., distance 14 miles.
2040 L Transmitted RAZORBACK's Fifteenth to Com Sub Pac.

2 June 1946:

0035 L SV contact on Southern tip of GUAM bearing 304° T.
range 100,700 yards.
0100 L Sighted ship bearing 295°T. distance 16,000 yards.
0736 L Approaching APRA HARBOR entrance.
0904 L Moored starboard side to Sail 5, U.S. SUBMARINE BASE,
GUAM, M.I.

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(C) WEATHER:

Very good weather conditions were experienced throughout the patrol. No storms were encountered and an average state two to moderate sea held. The sea was usually from a northeasterly direction during the trip west, being for the most part abaft the beam to directly aft. From NAURU ISLAND to GUAM the sea was still from abaft the beam to directly aft, being from a southeasterly direction. Frequent rain squalls were encountered but on the whole the visibility was good. At JOHNSON ISLAND and NAURU ISLAND rain squalls with decreased visibility somewhat hindered the taking of pictures. With few exceptions the Navigator was able to get his sights every day.

(D) TIDAL INFORMATION:

Following the course line as laid down on the track chart of the patrol from PEARL HARBOR to approximately 8 degrees north latitude, a northeasterly current of between 1 knot and 1.5 knots held. During the reconnaissance of JOHNSON ISLAND this current had an average 2 knot drift. At approximately 8° North latitude the current shifted to a northwesterly direction with an average 1 knot drift. At approximately 3° North latitude, the northeasterly equatorial current was encountered with an average drift of 2 knots. This current held during the reconnaissance of NAURU ISLAND, (30' South Latitude) at which point it had a drift of 2.5 knots. From NAURU ISLAND to 8° North latitude, (TRUK ISLAND) the northeasterly equatorial current with an average 2 knot drift held. Between TRUK and GUAM the current gradually shifted to the north west with an average 1 knot drift.

(E) NAVIGATIONAL AIDS:

1. JOHNSON ISLAND AREA: Charts of JOHNSON and SAND ISLAND with fathometer readings were found to be correct. Land marks were easy to pick out and at night numerous lights and aviation beacons were visible. Tangents are fairly difficult to define at range of 4,000 yards, periscope depth, as both islands lie fairly low in the water.

2. KWAJALEIN ATOLL AREA:

Charts of this area were found to be very good. The harbor was well bouyed and no difficulties in navigation were encountered. On the KWAJALEIN-ROI HIGHWAY bouys 8 and 13 were missing. Land marks were easily distinguished.

3. NAURU ISLAND:

The only chart of this Island available was an Australian Government chart of 1921. This chart has no fathometer readings.

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U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE.

R E S T R I C T E D

(E) NAVIGATIONAL AIDS: (Con'd)

3. NAURU ISLAND AREA: (Con'd)

The chart itself is fairly good. Numerous lights were observed on the western side of the island. None of these lights could be identified as the navigational light listed on the chart. No radio masts were observed on the northern end of the island as specified on the chart. For landmarks and lights observed see chart of NAURU ISLAND submitted with this report.

4. TRUK ATOLL AREA:

Charts of TRUK ATOLL are very good. The RAZORBACK was re-routed so as to enter the Atoll through NORTHEAST PASS instead of SOUTH PASS. NORTHEAST PASS is approximately 400 yards wide at it's narrowest point and was approached with caution. At its shallowest spot which is approximately the mid-point of the channel it is six fathoms deep.

A pilot was furnished from the Naval Shore Station of MOEN ISLAND. The area north and west of MOEN ISLAND has been swept of mines. One bouy listed on the chart directly west of NORTHEAST PASS 4,500 yards marking a shoal is missing. Navigation by charts obtainable is fairly easy. Land marks are plainly marked and cuts can be taken. The present anchorage area is off the north west end of MOEN ISLAND.

There are at present no navigational lights in operation on the Atoll. Information obtained from the Port Director is that NORTH EAST PASS is the only entrance to the Atoll that has been completely swept of mines.

5. GUAM AREA:

APRA HARBOR, GUAM was entered with little difficulty. Channels are clearly marked by bouys. The channel passing to the north of WESTERN SHOLL is easier to navigate than the channel passing to the south of the shoal. The north channel has more turns in it but it is much wider and is well bouyed.

(F) SHIP CONTACTS:

The only ships contacted on this run were upon the arrival or departure from a port. No ships were contacted during the entire cruise after a day out of port.

U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(C) AIRCRAFT CONTACTS:

Aircraft contacts were limited to the vicinity of JOHNSON ISLAND, KWAJALEIN and GUAM ISLAND. Several planes were picked up both visually and radar on the route from KWAJALEIN to GUAM. The majority of these contacts were air transports.

(H) ATTACK DATA:

None.

(I) No mines were encountered on the cruise. A large buoy believed at first to be a mine, was sighted and sunk by .50 cal. machine gun.

(J) ANTISUBMARINE MEASURES AND EVASION TACTICS:

None.

(K) MAJOR DEFECTS AND DAMAGE:

On 21 May 1946, #10 unit of #3 main engine developed a crack in the water jacket about $1\frac{1}{2}$ inches in length near the indicator cock. Engine at the time of the casualty was carrying a load of 895 KW. Water loss was not great enough to warrant changing liner at sea.

On 28 May, attempted to start #3 main engine by air but it failed to turn over. Investigation revealed lub oil in #6 unit combustion space. The engine had been idle for about a period of 10 hours. #6 upper and lower pistons were pulled but no broken rings or cracked pistons were discovered. The rings of the upper and lower pistons of units #7 - 10 inclusively were inspected but all found in satisfactory condition. The vertical drive lock plates were sheared. This was repaired at sea. Since then we have not encountered any further collection of oil.

HULL:

The Garlock Chevron Type packing installed incident to installation of the hydraulic periscope hoists by the Navy Yard has proven very unsatisfactory. Both glands leak profusely at periscope depth. Below 120' No.2 periscope gland stops leaking whereas No.1 leaks at all depths. In addition, No.1 periscope is very difficult to train.

The Yard repacked both periscopes after the original installation in an attempt to alleviate the above conditions.

Light grease was used at first and later torpedo tail packing was tried with the same negative results. It will take more than grease to stop the present leaks.

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U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE.

R E S T R I C T E D

(K) MAJOR DEFECTS AND DAMAGE: (Con'd)

GUNNERY:

The Star wheel assemblies in both 40mm loaders were found to be reversed upon the first attempt to fire the guns after overhaul. The loaders were disassembled and installed correctly.

This vessel was furnished with a Ketay Polaroid dimmer conversion kit for the torpedo firing panels. This equipment was found to be unsatisfactory. It was difficult to determine whether the ready lights were on or off even when adjusted for maximum brightness.

The conning tower Mk IV Mod O bearing and range repeater is out of commission. The extreme complication of the TDS system and the lack of experienced personnel and blueprints makes it very difficult to effect repairs. Trial and error methods have proven unsuccessful. The trouble manifests itself in reverse rotation of the bearing repeater, overheating of both selsyns and various errors for various combination of transmitters.

(L) RADIO:

Radio reception was fair to good and we experienced little trouble in receiving when on the surface. Several serials were missed due to submerged operations off NAURU ISLAND on 25 May 1946. The serials were not repeated. Very few serials were repeated by NPN and as a result keeping our files solid resulted in conflict between training dives and Fox schedules.

In general radio communications were good with the exception of NPN which failed to deliver our traffic addressed to CTG 17.10 on several occasions. It took ten days for NPN to deliver our movement report to CTG 17.10. It was discovered upon arrival GUAM that NPN was in the midst of changing its internal organization and had misfiled our traffic.

SHIP TO SHORE TRANSMISSIONS

No.	Date	Time of Delivery	Total time To Clear	To	Via	Freq. Used.
1.	15 May	0815 Z	9 Min	NPM	Direct	8470
2.	16 May	0905 Z	55 Min	NPM	Direct	12705
3.	17 May	1016 Z	1 Hr.38 Min	NPM	Direct	12705
4.	18 May	0856 Z	27 Min	NPM	Direct	12705
5.	19 May	0917 Z	46 Min	NPN	Direct	12705
6.	20 May	0845 Z	11 Min	NPG	Direct	12705
7.	21 May	0849 Z	16 Min	NPM	Direct	12705

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U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(L) RADIO: (Con'd)

SHIP TO SHORE TRANSMISSIONS

No.	Date	Time of Delivery	Total Time to Clear	To	Via	Freq Used;
8.	22 May	0928 Z	12 Min	NPM	Direct	12705
9.	24 May	1030 Z	52 Min	NPO	Direct	8470
10.	25 May	1143 Z	57 Min	NPM	Direct	12705
11.	26 May	0926 Z	9 Min	NPN	Direct	12705
12.	27 May	1015 Z	23 Min	NPG	Direct	12705
13.	28 May	1015 Z	38 Min	NPG	Direct	12705
14.	29 May	1045 Z	18 Min	NPN	Direct	4235
15.	01 June	1047 Z	17 Min	NPN	Direct	4235

MATERIAL:

No major radio casualties were suffered on this patrol. The operation of the transmitter and receivers were excellent. We had no occasion to use the SCR-610 or VHF transmitter sets. During the training period we experienced difficulty in calling over even a short distance with the TBL-12. Upon investigation it was discovered that in rewiring the antenna system during the Navy Yard Overhaul several leads had been reversed behind the antenna selector panel. This condition was quickly remedied.

Upon surfacing from a training dive on 8 May 1946 the forward bridge 7 MC speaker was found to have broken from its mounting due to failure of the rubber sound mounting brackets. This type of sound mounting appears to be unsatisfactory since this was the second failure of these mountings. The entire weight of the speaker is supported by a bolt which is vulcanized to the rubber. We installed the bolts with large metal washers on both sides of the rubber shock mounting and with no loss of sound mounting efficiency have had no reoccurrence of the difficulty.

(M) RADAR DEFECTS AND DAMAGES:

SJ/ST RADAR:

1. A loose pin connection in V-2., sweep cathode follower of the range indicator, caused a bad jitter in the sweep. Repaired by re-soldering the connection.

2. Two cathode bias resistors in V-3, sweep amplifier, losing value and breaking caused the sweep to be of improper length. These parts were replaced from spare parts.

U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(M) RADAR DEFECTS AND DAMAGES: (Con't)

SJ/ST RADAR:

3. Improper horizontal centering was traced to horizontal centering potentiometer P-2 changing in value. Part was replaced from spares.

4. The plate resister in sweep cathode follower of the range indicator decreasing in value caused the loss of all three sweeps. Replaced from spares.

5. The maximum ranges on land targets were less than ten thousand yards, all efforts by us to improve the operation were to no avail. Recommend an inspection by a more experienced technician on a shore activity.

SV RADAR:

1. A bad magnetron caused transmitting on twin frequencies, unstable keyer current, and low magnetron current. Magnetron was replaced from spares.

2. Interference between the 7 MC system and SV was caused whenever the 7 MC was used. This was eliminated by putting the 7 MC and Radar on separate IC generators.

(N) SONAR GEAR AND SOUND CONDITIONS:

Sonar Gear Performance:

No sonar contacts were made.

Sonar Gear Casualties:

WCA-2

1. Intermittent slipping out of power training on the QB head was found to be caused by a loose brace holding the hand-power clutch. Brace was tightened up and trouble disappeared.

2. The main starting relay (669) in the QC training motor magnetic controller coil opened up putting the QC sound out of commission. The coil was replaced from spare parts.

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U.S.S. RAZORBAC K (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(N) SONAR GEAR AND SOUND CONDITIONS: (Con'd)

Sonar Gear Casualties:

WCA-2

3. A 250 volt D.C. ground was traced to remote start-switch in the QC training. Part was replaced from spare parts.

4. The gold braid slip rings on the QB sound head gave their usual difficulties of noise and vibration. This condition was helped somewhat by cleaning the rings and braid with spirits daily.

JT

1. The azimuth cards on the synchro-motor slipped on its shaft causing a 10 degree error in sound bearing readings. The card was corrected and tightened up.

(O) DENSITY LAYERS:

Bathythermograph cards revealed only isothermal water on every dive.

(P) HEALTH, FOOD AND HABITABILITY:

The preparation and quality of the food was good. In general the health of the crew was satisfactory. There were no incidence of communicable diseases. The following is a list of injuries and diseases contacted during the period of this report:

Contusion, Left foot	1
FUNGUS Infection, skin feet	1
SCABIES	1

(Q) PERSONNEL:

(a) Number of men detached since 13 September 1945 - - - -	-62
(b) Number of men on board who completed 5th war patrol - - -	13
(c) Number of men qualified at start of patrol - - - - -	-44
(d) Number of men that reported aboard during period of 6 January to 13 May 1946 - - - - -	-42
(e) Number qualified at end of patrol - - - - -	-45

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U.S.S. RAZORBACK (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(Q) (f) Number of unqualified men making their first patrol - 20

From looking at the above tabulation it is easily seen that there has been a rapid turnover of the enlisted personnel. During the period of this simulated patrol the state of training of the personnel was observed to be definitely below that of wartime operation. This condition has been improved somewhat during the period covering this report.

It is felt that this condition exists because of the following reasons:

- (a) General let down after culmination of the war.
- (b) Loss of so many well trained men.
- (c) Lack of danger from any enemy. It is felt that the men were more "on their toes" because of the possible danger from the enemy.
- (d) Separation from their families.
- (e) Inability to choose personnel because of the abolishment of relief crews and general lack of personnel.
- (f) Lack of motivation.

(R) MILES STEAMED

Place	To	Miles	Fuel Used
PEARL	JOHNSON IS.	710	5,470
JOHNSON IS.	KWAJALEIN	1554	18,846
KWAJALEIN	NAURU	565	5,820
NAURU	TRUK	1014	13,890
TRUK	GUAM	668	6,900
	TOTAL	4511	50,526

(S) DURATION:

Days on Patrol 20 days
Days Submerged 2 days

(T) FACTORS OF ENDURANCE REMAINING:

Torpedoes	Fuel	Provisions	Personnel Factors.
<u>16</u>	<u>67,000 Gal</u>	<u>45 days</u>	<u>?</u>

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U.S.S. RAZORBAC K (SS 394)
SIMULATED WAR PATROL NUMBER ONE

R E S T R I C T E D

(U) COMMUNICATIONS, RADAR, AND SONAR COUNTERMEASURES:

None

(V) REMARKS:

It was felt that one of the most difficult features of this cruise was the morale of the crew and that the best thing to do was keep them busy.

Each day would start out with a training dive at 0630. It acted as reveille for the boys. The first hour of the work day was devoted to cleaning up the ship. This was followed by a lecture with one section attending, this lecture being given by an officer. Four times a week pointer drill and sight setting drill was held, generally on Monday, Tuesday, Thursday, and Friday. Another training dive was made on the forenoon watch. At 1310 another school of the boat lecture was held. A third training dive was made in the afternoon watch with a battle problem every other day. A problem was run in the wardroom furnishing the conning officer with whatever information he desired. A third lecture was given at 1610.

Three cash prizes were awarded to lookouts who had the three highest scores for the cruise. Points were awarded for sightings, mines having the greatest score following in succession by land, planes and ship.

Upon arrival in GUAM four softball teams were formed from each section and the officers and chiefs.

Reveille was at 0530 and the working day, when in port started at 0700 ending at 1200. I think that this worked out to everyone's advantage. There was a softball game every afternoon.

On Sundays generally two sections and two officers would go over to Camp Dealey for the day.

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SUBMARINE DIVISION TWELVE

FIRST ENDORSEMENT to
USS RAZORBACK's report of
1st Training Patrol: ltr
of 2 June 1946, Serial 144.

Care of Fleet Post Office,
San Francisco, California,
22 July 1946.

From: The Commander Submarine Division TWELVE.
To: The Commander Submarine Force, U.S. Pacific Fleet.
Via: (1) The Commander Submarine Squadron ONE.
Subject: U.S.S. RAZORBACK (SS 394) Simulated War Patrol Number
ONE - Report of.

1. Forwarded.
2. This is a well and carefully prepared report of a training patrol.
3. Since 2 June, 1946, the RAZORBACK has experienced six additional cracked cylinder liners in number three(3) and number four(4) main engines, similar to the defect described under section (K) of the report. The cracked liners are being renewed and steps are being taken to ascertain the cause of this casualty. A report to the Bureau of Ships will be made by separate letter.
4. The general material condition and the cleanliness of the RAZORBACK upon her return from this detached duty was excellent. This indicates an efficient and progressive ship's force maintenance program.


E. J. MacGREGOR.

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Serial: 377

Pearl Harbor, T. H.
22 July 1946.

SECOND ENDORSEMENT to
OO RAZORBACK Ltr.
SS394 Ser 144 of 2
June 1946. Simulated
War Patrol No. ONE

From: The Commander Submarine Squadron ONE.
To: The Commander Submarine Force, Pacific Fleet
Subject: U.S.S. RAZORBACK (SS 394) Simulated War Patrol
Number ONE - report of.

1. Forwarded. A conscientious and well prepared report.
2. The patrol was conducted in what is considered the correct spirit of the simulated war patrol.
3. The reconnaissance of NAURU was well performed despite conditions of poor photographic visibility.
4. The commanding officers remarks on TRUK hospitality confirm the findings of other vessels of this squadron at that atoll.
5. Despite recent coast guard protests in the matter, the action of the commanding officer in destroying a suspected mine is thoroughly approved. In such cases error if any should be made on the safe side.
6. (a) Of the commanding officers closing recommendations the following are concurred in:
 - (1) That targets be made available for torpedo fire prior to entrance into port (though not necessarily just off the entrance).
 - (2) That two daylight periods be permitted in ports visited.
 - (3) That the 40mm gun be better balanced.
 - (4) That the Submarine FOX schedules be repeated to insure reception.
- (b) The squadron commander is reserving comment, pending further study, on recommendations 4 (conning tower arrangement) and 7 (side antennas).
- (c) The length of a submarine's stay in GUAM, (recommendation 5), being governed by overall commitments and availability of boats is not commented on here. Likewise, the subject of painting submarines is avoided in view of recent comments to the Force Commander by this command.

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Copy to:
CSS-12
OO RAZORBACK

R. J. FOLEY

~~R E S T R I C T E D~~

COMMANDER SUBMARINE FORCE
UNITED STATES PACIFIC FLEET

ps

FM12-10/A16-3(2)

Care of Fleet Post Office,
San Francisco, California,
20 August 1946.

Serial: 1738

THIRD ENDORSEMENT to
CO, RAZORBACK ltr. SS394,
Serial 144, dated 2 June 1946.

From: The Commander Submarine Force, U. S. Pacific Fleet.
To : Submarine Force, Pacific Fleet.
Subject: U. S. S. RAZORBACK (SS 394) - Simulated War Patrol No. ONE -
Report of.

1. The Force Commander fully concurs with the remarks of
Commander Submarine Squadron ONE in paragraphs 1, 2, 3, and 5 of his
endorsement.

2. The situation described under paragraph Q (Personnel) is
recognized. This is considered the greatest problem facing the Commanding
Officers of submarines of this Force today. Every effort must be made to
raise the state of training of both officers and men to as high a degree as
possible. The feeling that Commanding Officers are unable to choose personnel
"because of the abolishment of reader crews and general lack of personnel"
must not become so influential that the standards for retention in the sub-
marine service are lowered. It is considered axiomatic that every effort
must be made to advance the training of each individual considered worthy of
retention in submarines and, conversely, that that time is lost which is spent
in attempting to train anyone who is recognized as not meeting the standards
for retention.

3. The remarks concerning the questionable value of the side
antennae are substantiated by other submarines who have attempted to
communicate over great distances.

4. The fact that the Bathythermograph cards indicated iso-
thermal water on every dive casts suspicion on the proper operation of
the bathythermograph.

5. The Force Commander is pleased with the industry and attention
to duty displayed by the Commanding Officer, officers, and men of U. S. S.
RAZORBACK in carrying out this assignment.

W. H. Hazzard
W. H. HAZZARD,
Commander, USM,
Flag Secretary.

FRANK T. WATKINS,
Chief of Staff.

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