

DECLASSIFIED

SS346/RJD:lwl
3400
Ser: 043
2 March 1970

From: Commanding Officer, USS CORPORAL (SS346)
To: Commander Submarine Force, U. S. Atlantic Fleet
Via: Commander Submarine Flotilla EIGHT

Subj: Mediterranean Deployment; report of (U)

Ref: (a) COMSUBLANTINST 3480.1N

Encl: (1) Statistic Summary

DECLASSIFIED

1. (U) In accordance with reference (a), subject report is submitted herewith.

2. (C) SUMMARY OF DEPLOYMENT:

a. CORPORAL deployed from New London on 14 November 1969 and inchooped to CINCUSNAVEUR/COMSIXTHFLT on 1 December 1969. Turnover was conducted at Rota, Spain with USS SIRAGO (SS485) on 2 December 1969. The following data relates to the period 1 December 1969 to 3 March 1970, the duration of operational control under Commander Sixth Fleet.

b. SCHEDULE:

1-2 DEC	Turnover Rota, Spain
3-6 DEC	Transit/Services to Task Force 67
7-10 DEC	Port visit Toulon, France
11-17 DEC	Exercise Mediterranean
18 DEC	Transit
19 DEC-2 JAN	Port visit Monaco
3-7 JAN	Transit and Services to Task Force 67/Task Group 60.1
8-11 JAN	Port visit Naples, Italy
12 JAN	Transit
13 JAN	Transit and ASW DEMO for Assistant Secretary of Navy
14 JAN	Transit
15 JAN	Transit/Services to Task Force 67/brief stop Naples, Italy
16 JAN	Transit/ASW DEMO for Assistant Secretary of Navy and Services Task Force 67
17 JAN	Exercise DEEP SIX/transit
18 JAN	Transit
19-21 JAN	Port visit Naples, Italy (NAV)
22 JAN	Transit/Services to Task Group 60.1
23-25 JAN	Services to Task Group 60.1
26 JAN	Transit
27-30 JAN	Port visit Iraklion, Crete
31 JAN-2 FEB	Transit/Services to Task Force 67/Task Group 60.1

DECLASSIFIED

DECLASSIFIED AT 3-YR INTERVALS, DECLASSIFIED AFTER 12 YEARS. DOD DIR 5200.10

DECLASSIFIED

3400

SCHEDULE (Continued)

3-5 FEB Exercise NATIONAL WEEK
 6 FEB Transit
 7-12 FEB Port visit Athens, Greece
 13-14 FEB Transit
 15 FEB Exercise MEDASWEX, Task Group 60.2
 16 FEB Transit/Services to Task Force 67
 17-18 FEB Transit/brief stop Naples, Italy
 19-27 FEB Port visit Palma, Mallorca, Spain
 28 FEB-1 MAR Transit
 2 MAR Turnover Rota, Spain with USS REMORA (SS487)
 3 MAR Transit/Outchop

c. STATISTICS:

UNDERWAY: 51 Percent

	<u>HOURS</u>	<u>PERCENT</u>	<u>MILES</u>
(1) Transit	669	60	6650
(2) Services			
(TF 67)	67	6	212
(TF60)	151	14	443
(3) TYP	0	0	0
(4) Exercises	225	20	1408
TOTAL	1112	100	8713

IMPORT: 49 Percent

	<u>HOURS</u>	<u>PERCENT</u>
(1) Rota	68	6
(2) Toulon	67	6
(3) Monaco	380	35
(4) Naples	152	14
(5) Iraklion	73	7
(6) Athens	141	13
(7) Palma	209	19
TOTAL	1090	100

GROUP 4
 DOWNGRADED at 3 year
 intervals: declassified

DECLASSIFIED

DECLASSIFIED

DECLASSIFIED

percentage of the total time CORPORAL was assigned to SINKER was spent inport or surface transiting.

e. SERVICES:

(1) TF 60/67 Services to TF 60 (CVA Group) consisted primarily of exercises from FXP-1(D) and also included opposed transits, replenishments and sorties.

Services to TF 67 (VP) consisted of exercises (JULIE/JEK) from COMPAIRWINGLANT INST 03500.73.

(2) Exercise Mediterranean This was a Bilateral French - U.S. exercise involving 15 French and 14 U.S. Ships. Submarine opposition was provided by CORPORAL and three French Submarines, (Daphne Class). The exercise combined ASW, RAN, and Amphibious Landing Operations, and was divided into two major phases with forces divided into two opposing carrier task groups. Submarines were positioned to engage any surface unit passing through their assigned patrol areas. CORPORAL did not encounter or engage any surface forces during the exercise. During this exercise, a French Naval Officer from COSCOMED Staff at Toulon, France embarked CORPORAL while one officer from this ship embarked the French Submarine DORIS (S643). The exchange was most helpful to CORPORAL in that many messages and some of the operation orders for the exercise were written in the French Language and interpretation was required.

(3) ASW Demonstration CORPORAL provided services on 13 and 16 January to Destroyers and VP aircraft as a participant in a ASW demonstration for the Under Secretary of the Navy, the Honorable John W. WARNER.

(4) Exercise Deep Six III This exercise involved the sinking of the French LSD FOUDEK by French and U.S. Naval Forces. CORPORAL was OCE for the SINKER PHASE which concluded several days of bombardment by surface units and carrier aircraft. CORPORAL fired one MK 14-5 Warshot Torpedo at a range of 1720 yards, speed set high, running depth seven feet, (minimum running depth was specified by the exercise directive but a compromise was made). The target was lying to and had a starboard 85 SQR, the gyro angle was right 02 at ROP. The torpedo ran hot, straight, and normal for 42 seconds (1050 yards) and then shut down. A sonar tape recording of the torpedo run indicated that the unit breached, probably as a result of the combination of shallow depth setting/high sea state (10-15 feet), causing the overspeed governor to actuate propulsion shutdown. U.S. Destroyers delivered the Coup De Grace from point blank range with naval gunfire.

(5) MEDASWEX This exercise was conducted to evaluate communications coordination between VP/D. **CONFIDENTIAL** Supporting an advance ASW protection for a Carrier Task Group.

GROUP 4
DOWNGRADED at 3 year
intervals; declassified
after 12 years.

DECLASSIFIED

DECLASSIFIED

CONFIDENTIAL

DECLASSIFIED

3401

intruder with DACE the ASW submarine. A total of 3 seven hour submerged/snorkel transits were conducted through an area 14 by 42 miles. Results of the exercise have not been published at the time of this writing.

TACTICAL EVALUATION:

(1) The sound velocity profile in the Mediterranean during the winter months is unfavorable to submarine deception for a 412 foot operating depth submarine. The water temperature was essentially isothermal to 400 feet. Detection ranges by destroyers generally varied between 10,000 and 15,000 yards. ASROC equipped destroyers invariably utilized the following tactic on numerous encounters during Task Group ASW exercises:

The destroyer would close with a small AOB to a range which averaged 5000 yards at which time the destroyer would turn 45 to 90 degrees to unmask the ASROC launcher and simulate firing. A submarine planning to fire a Mk 14-5 torpedo is forced to fire as the destroyer turns or immediately thereafter, otherwise the submarine will be taken under attack first. Considering the fact that the destroyer is turning or has just completed a turn, the determination of accurate information for target course and speed in the submarine fire control solution is difficult and the probability of a hit is small.

A high speed conventional warhead torpedo with a guidance and range capability of a least 9000 yards is needed to effectively combat low frequency sonar equipped ASW units with ahead thrown ASW weapons (i.e.: MBU), especially in isothermal water.

(2) Final results of MEDASWEX during which CORPORAL transitted a 14 by 42 mile area patrolled by DACE acting as an advance ASW unit have not been published at the time of this writing.

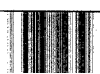
A quick look summary indicated DACE gained/maintained contact during the run CORPORAL snorkeled for a period in excess of one hour. On subsequent runs snorkel periods were limited to an average of 35 minutes, and the quicklook summary stated DACE did not gain contact on these runs. Obviously length of snorkel periods must be limited if a diesel submarine is to avoid intercept by a high speed nuclear submarine with sophisticated sonar capabilities.

MATERIAL: Upon INCHOP CORPORAL had no outstanding Casrepts. During the deployment a total of five Casrepts were submitted and are summarized as follows:

DECLASSIFIED

DECLASSIFIED

GROUP 4
DOWNGRADED at 3 year
intervals; declassified
after 12 years.



DECLASSIFIED

<u>DTG Casrept</u>	<u>Title/Brief</u>	<u>DTG Cascor</u>	<u>Category</u>
021306ZJAN70	AN/BQS-4C Active Sonar (Part failure)	112122ZJAN70	C-2
132003ZJAN70	Air Conditioning Salt Water System (Pipe failure)	220537ZJAN70	C-3
142212ZJAN70	GM 16-278AS, NR 4 Diesel Engine (Cracked Block)	211952ZJAN70	C-2
312333ZJAN70	GM 16-278AS, NR 1 Diesel Engine (Wiped Crankshaft)	ETR 15APR70	C-2
152302ZFEB70	Loran "C" AN/WPN-4 (Module Failure)	ETR 31MAR70	C-2

Repairs to the cracked engine block and a hole in the air conditioning salt water discharge piping system were completed by the USS YELLOWSTONE (AO27) during a 60 hour RAV at Naples, Italy. Services rendered by YELLOWSTONE Repair Department were professionally competent and provided in a most cooperative manner.

Heavy seas resulted in the loss of one fiberglass superstructure clamshell section. YELLOWSTONE manufactured and installed a steel clamshell replacement during the RAV assigned for Casrept repairs.

The repair part for the BQS-4C Casrept was obtained from the USS TRIGGER(SS-566) during a joint stay at Naples. As of this writing the repair part for the Loran Charlie Casrept ordered on priority two has not been received onboard.

Repairs to NR 1 diesel engine, (replacement of crankshaft) has been deferred until arrival CONUS because of the extensive alongside work required.

SUPPLY

A total of 124 requisitions were submitted during this deployment. A summary of supply statistics follows:

Number of requisitions filled 112

Number of requisitions cancelled by supply activities 0

GROUP 4

DOWNGRADED at 3 year intervals; declassified after 12 years.

DECLASSIFIED 5

DECLASSIFIED
CONFIDENTIAL

DECLASSIFIED

3400

Average number of days to fill requisitions (submitted by Milstrip msg) 14

Number of parts required for Casrepts, filled 0

Number of parts required for Casrepts, not filled 2

Critical items which were unavailable to CORPORAL during the deployment were:

<u>ITEM</u>	<u>FSN</u>
1) Upper & lower con rod brgs	2815 353 8414 2815 601 3953
2) Cam section for main engine	2815 126 5038
3) Loran "C" Module (Casrept)	5840 023 1970
4) T 6001 High voltage transformer for BQS-4C (Casrept)	5950 679 0163

COMMUNICATIONS:

Communications in the Mediterranean were voluminous. CORPORAL processed an average of 150 outgoing and 750 incoming messages per month. A monthly average of approximately 1500 messages were received via the KSJ Broadcast. The majority of outgoing messages were passed via Task Group Sixty Point One and Two Orestes circuits. Surface units were quick to accept submarine traffic and more often than not accepted CORPORAL's traffic ahead of other surface units traffic of higher precedence.

Difficulties were experienced communicating with Shore stations. This is believed to have been caused by a combination of atmospheric, local terrain (dead spots) and equipment capabilities. CORPORAL concurs with the recommendation in CTF-69 OPOD 1-YR to utilize Task Force Orestes circuits for message traffic whenever possible.

COMSUBFLOT EIGHT's recommendation (CSF8 03480.2A) to carry a spare WRR-3 receiver to copy both the LF and HF components of the KSJ broadcast simultaneously (diversity) proved helpful. The Diversity method of broadcast copying was required in the areas near southern Spain. Broadcast reception in the rest of the Mediterranean was good to excellent and the use of Diversity was not required.

AUTODIN procedures are used in the Mediterranean for message routing. Initial conversion to this system requires an attentive on board training program to affect a smooth transition to the system. Once procedures are thoroughly understood the system is simple to use.

GROUP 4
DOWNGRADED at 3 year intervals; declassified after 12 years.

DECLASSIFIED

DECLASSIFIED