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NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
FORT GEORGE G. MEADE, MARYLAND 20755-6000

Serial: MDR-85456
22 February 2017

Mr. John Greenewald
[REDACTED]

Dear Mr. Greenewald:

This responds to your request of 14 September 2016 to have the document entitled "A Review of the Technical Research Ship Program 1961-1969" reviewed for declassification. The document was reviewed under the Mandatory Declassification Review (MDR) requirements of Executive Order (E.O.) 13526 in another case in January 2017. The document from that case responds to your request and is enclosed. We have determined that some of the information in the document continues to require protection.

Some portions deleted from the document were found to be currently and properly classified in accordance with E.O. 13526. The information denied meets the criteria for classification as set forth in Section 1.4 subparagraph (c) and remains classified TOP SECRET as provided in Section 1.2 of E.O. 13526. The withheld information is exempt from automatic declassification in accordance with Section 3.3(b) (3) of the Executive Order. In addition, Section 3.5 (c) of E.O. 13526 allows for the protection of information under the provisions of law. Therefore, information revealing NSA/CSS functions and activities has been protected in accordance with Section 6, Public Law 86-36 (50 U.S. Code 3605, formerly 50 U.S. Code 402 note).

Since your request for declassification has been partially denied, you are hereby advised of this Agency's appeal procedures. Any person denied access to information may file an appeal to the NSA/CSS MDR Appeal Authority. The appeal must be postmarked no later than 60 calendar days after the date of the denial letter. The appeal shall be in writing addressed to the NSA/CSS MDR Appeal Authority (P133), National Security Agency, 9800 Savage Road, STE 6881, Fort George G. Meade, MD 20755-6881. The appeal shall reference the initial denial of access and shall contain, in sufficient detail and particularity, the grounds upon which the requester believes the release of information is required. The NSA/CSS MDR Appeal Authority will endeavor to respond to the appeal within 60 working days after receipt of the appeal.

If you have questions regarding this action, please contact me at 301-688-7785.

Sincerely,

A handwritten signature in dark ink, appearing to read "Blake C. Barnes", followed by a long horizontal line extending to the right.

BLAKE C. BARNES
Chief
Declassification Services

Encl:
a/s

Clear Cases

(I) Return to Historian

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Declassified and Approved for Release by NSA on 01-17-2017 in MDR 83527 pursuant to E.O. 13526

A REVIEW OF
THE TECHNICAL RESEARCH SHIP PROGRAM
1961 - 1969

Prepared By:

Miss Julie Alger

K18

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P R E F A C E

During the period 1961-1969 inclusive, a number of dedicated seaborne surface platforms, generally referred to as technical research ships, conducted SIGINT collection under the control of the National Security Agency. These ships supported the national SIGINT effort by operating in navigable international waters, primarily providing coverage in coastal area, on targets not otherwise accessible to collection resources.

The technical research ship program was terminated in October 1969, by the office of the Secretary of Defense, as part of the reduction in Department of Defense operations necessitated by budgetary limitations.

This review documents the significant aspects of technical research ship operations. Besides summarizing the history of the program, it highlights those considerations that affected operations and, when possible, indicates the actions taken to alleviate or solve problems that were encountered.

The intention in producing this review is to provide a ready reference for those involved in the future planning for, and conduct of operations by, dedicated seaborne surface SIGINT collection platforms.

E. J. Pierucki
E. J. PIERUCKI
CAPT USN
Chief K1
May 1, 1970

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SECTION I

WHY TECHNICAL RESEARCH SHIPS?

In 1956, the political situation in the Near East had become critical enough to warrant supplementing the existing ground collection resources with a shipborne platform in the eastern Mediterranean to operate between Cyprus and Port Said. DIRNSA requested that one ship, selected by the Navy, be modified for the task and solicited Navy's views on operating the vessel with Coast Guard personnel. (1)

The underlying reasons for the conception of a SIGINT shipborne collection platform included the probability that it would not be subject to the whims of "friendly" nations. Unlike the ground-based sites on foreign soil, a ship would be immune to the sudden shifts in international politics which could and have resulted in demands for services by and closure of U.S. overseas collection facilities. The decline in status of NATO and the choices forced by France and the Soviet Union on the Federal Republic of Germany threatened the U.S. SIGINT posture in western Europe.

The technical research ship was inherently a quick reaction facility by its very nature as a mobile resource. It was therefore, responsive to collection requirements in areas where there had been no previous interest; areas which suddenly became the scene of events of important intelligence value (e.g. the Dominican Republic crises in 1965 and the Congolese situation in 1964). Obviously, a TRS could be on the scene and operational long before a ground facility could be installed.

A technical research ship would have the advantage of being able to follow a target signal, not only literally in the case of the target being another mobile platform, but also in the event the signal shifted to a low power or microwave system. While a ground site might lose the signal completely, the mobile platform could move into a better position for intercept.

(1) DIRNSA letter ser: N-5137 to CNO, dtd 28 June 1956

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A technical research ship could also provide a search and development facility for areas in the world where no collection facilities existed by collection from adjacent waters and establish and maintain a technical data base on these areas if desired.

INITIAL PROGRAMMING

After several months of consideration, the Naval Security Group concluded that a seaborne intercept platform could best be provided by converting a World War II merchant cargo vessel. It was determined that conversion of this ship would be relatively economical since the existing operational capabilities would be adequate.

The Bureau of Ships estimated that conversion of a Liberty Ship to a collection platform would cost approximately \$4.5 million dollars. The figure was based on the assumption that modifications would be similar to those necessary to convert a Liberty Ship into a picket radar ship, and would be accomplished at a shipyard that was familiar with the task. The annual cost of upkeep and maintenance was estimated to be \$295,000.00. (2)

It was, however, necessary to improve damage control facilities to meet minimum Navy standards, divide the hull into compartments, properly ballast for trim, mount antennas and electronic equipment, provide for COMSEC aboard the ship, arrange quarters for ships' company and the SIGINT detachment as appropriate for long at-sea periods, sub-divide the SIGINT operations spaces (to provide compartments for intercept positions, general and SIGINT communications, processing, repair, storage, photo lab, power supply and administrative spaces), and provide communications facilities for a four channel multiplex radio-teletype plus two channels of either teletype or CW signals with a range of at least 2,000 miles for exchanges with headquarters. (3)

(2) COBUSHIPS C-FS/1/L9, ser: 527-0180, dtd 13 September 1958, "Conversion of Liberty Hull Merchant Ship for Radio Intercept Operations".

(3) Staff Proposal for Characteristics for Technical Research Ship, undated 1956.

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FIRST TECHNICAL RESEARCH SHIP

On 26 September 1961, the USS OXFORD, first of the Technical Research Ships, reoutfitted at the New York Shipyard, departed Norfolk, Va. for a forty-four day shake down cruise to Guantanamo. The SIGINT operations conducted on board by USN-850 was under the operational and technical control of the Director, NSA. The USS OXFORD itself was under the operational control of CINCLANT.

Because of the above-deck antennas, a cover story was necessary. Ostensibly, the USS OXFORD was a vessel equipped to investigate various kinds of natural phenomena, including radio wave propagation, hydrography and oceanography.

The interior of the ship had been arranged so that the research operations compartments were not subject to observation by the general service personnel. Most of the 10 COMINT, 5 ELINT and 1 DF intercept positions had been installed and separate facilities for secure COMINT communications were in place when the ship sailed.

The initial cruise of the USS OXFORD pointed out several problem areas. This was however, to be expected from a trial vessel, converted in response to urgent requirements with little time for planning and modifications. If a shipborne collection platform could have been operationally tested in a typical signal environment under normal conditions, lessons learned through experience might have then been applied to a subsequent shipborne platform. Such an approach would probably have adopted under other circumstances but the urgency of requirements and long lead time involved in converting a mothballed ship into a sophisticated electronic collection platform did not allow time for in-depth study.

It was necessary to begin conversion of a second TRS even before the USS OXFORD had completed its first trial operations. Because of these hasty conversions, certain changes in the construction of later TRS's were deemed necessary by DIRNSA.

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The type of equipment to be installed was determined at a conference of representatives of NSA, NSG and Electronics Defense Laboratories who acted as technical advisors. (4)

(4) DIRNSA ser: N-0246, dtd 13 February 1962

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SECTION 2

TYPES OF TECHNICAL RESEARCH SHIPS

AUXILIARY GENERAL TECHNICAL RESEARCH (AGTR) -
USS OXFORD, USS JAMESTOWN, USS GEORGETOWN,
USS BELMONT, USS LIBERTY.

The AGTRs were US Navy ships from reserve fleets, converted, according to Navy standards, to seaborne SIGINT collection platforms. The ships were under the military operational control of the US Navy. Both the operating crew (general service) and SIGINT detachment were comprised of naval personnel. The SIGINT detachment operated under the technical control of DIRNSA.

Basically, the operating schedule of an AGTR called for 16 week deployments and 2 month turn over port periods. The length of cruises, port calls and shipyard schedules were governed by Navy policies and the ships themselves were sponsored by CNO. With the exception of the OXFORD, it cost approximately \$3,100,000.00 to convert an AGTR and \$2,472,000.00 to operate it annually.

The AGTRs ranged in operating speeds from 8-10 kts (USS GEORGETOWN) to 15-20 kts (USS BELMONT/ USS LIBERTY), the swiftest being well suited to quick reaction or sweep missions.

MILITARY SEA TRANSPORTATION SHIP (MSTS) -
USNS VALDEZ, USNS MULLER

The MSTS ships or T-AGs (Technical Auxiliary General) were small coastal transports converted for the purpose of seaborne SIGINT collection. The ships were under the operational control of the military Sea Transportation Service. Both the master and operating crews were civilian while the SIGINT detachment aboard, known as the Military Department,

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was comprised of Naval Security Group personnel. The SIGINT detachment was under the technical control of DIRNSA.

Basically, the operating schedule for a T-AG called for 5 days in port for every 25 days at sea (not to exceed 25 days). Length of cruises, port calls and shipyard schedules were established by the Military Sea Transportation Service in coordination with NSA.

Originally, the T-AGs were sponsored by NSA, that is, NSA provided funds for the charter and operations of these ships on a yearly basis. In July 1967, sponsorship was turned over to the Chief of Naval Operations as part of a two-fold plan to convert all TRSs to T-AGs and remove NSA from the operational role as sponsor. The plan for conversion was never realized but the sponsorship was shifted as programmed.

These ships, with a maximum operating speed of 10-11 kts, were not capable of quick reaction or shadowing missions but were well suited for sustained, in-depth coverage of a limited area (e.g. the USNS MULLER off Cuba).

Another feature of these ships was the comparatively economical conversion and operating costs. The lower cost of conversion (\$3,300,000.00 & \$1,891,000.00) was due to the size and less rigid standards of the Military Sea Transportation Service as compared to those of the US Navy. Also, the annual operating cost (\$2,586,000.00) was significantly less per year than that of the AGTRs when on-station time is taken into consideration.

The on-station time of the T-AGs was consistently higher than that of the AGTRs because these ships were able to operate at sea for longer periods of time and the yard periods and overhauls could be performed in overseas ports (e.g. the USNS VALDEZ operated from Capetown South Africa 1961-1967) unlike the AGTRs which were required to return to CONUS, or in the case of the OXFORD/JAMESTOWN, to Subic, for yard periods.

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USS OXFORD (AGTR-1)

Former Hull Number: AG-159

Liberty Ship type: Z-EC2-S-C5

Displacement: 11,157 tons

Former Name: USS SAMUEL AITKEN (MCE-3127)

General Service Personnel Allowed: Officers - 9;
Enlisted - 151

NAVSECGRU Personnel Allowed: Officers - 6;
Enlisted - 110

Propulsion: Reciprocating Steam

Maximum Speed: 11 kts

First Commanding Officer: CDR Howard R. Lund

Conversion: New York Naval Shipyard

Commissioned: July 8, 1961

Cost of Conversion: \$13,300,000.00

COLLECTION CAPABILITY at deactivation

14 Manual Morse
3-Radiotelephone
2 Multichannel FDM
1 ELINT
1 D/F
2 Radioprinter

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USS GEORGETOWN (AGTR-2)

Former Hull Number: AG-165

Liberty Ship Hull type: A-EC2-S-C5

Displacement: 11,157 tons

Length: 441'

Former Name: SS ROBERT W. HART

General Service Personnel Allowed: Officers - 9;
Enlisted - 151

NAVSECGRU Personnel Allowed: Officers - 6;
Enlisted - 137

Propulsion: Reciprocating Steam

Maximum Speed: 11 kts

First Commanding Officer: LCDR Westly A. Gleason

Conversion: Newport News Shipbuilding and Drydock
Company

Commissioned: November 9, 1963

Cost: 3,100,000.00

COLLECTION CAPABILITY at deactivation

- 11 Manual Morse
- 1 Automorse
- 3 Radiotelephone
- 3 Radioprinter
- 1 NMSD
- 1 R/D
- 1 Telemetry

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USS JAMESTOWN (AGTR-3)

Former Hull No: AG-166

Liberty Ship Hull type: Z-EC2-S-C5

Displacement: 11,157 tons

Former Name: SS J. HOWLAND GARDNER

General Service Personnel Allowed: Officers - 9;
Enlisted - 151

NAVSECGRU Personnel Allowed: Officers - 6;
Enlisted - 137

Propulsion: Reciprocating Steam

Maximum Speed: 11 kts

First Commanding Officer: CDR Allen J. Kaplan

Conversion: Newport News Shipbuilding and Drydock Co.

Commissioned: December 13, 1963

Cost: \$3,000,000.00

COLLECTION CAPABILITY at deactivation

- 1 Automorse
- 11 Manual Morse
- 3 Radiotelephone
- 4 Radioprinter
- 1 NMSD
- 1 R/D
- 1 Telemetry
- 1 D/F

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USS BELMONT (AGTR-4)

Former Hull Number: AG-167

Victory Ship hull type: VC2-S-AP3

Displacement: 11,500 tons

Former Name: IRAN VICTORY

General Service Personnel Allowed: Officers - 9;
Enlisted - 151

NAVSECGRU Personnel Allowed: Officers - 6;
Enlisted - 128

Propulsion: Steam Turbine

Maximum Speed: 18 kts

First Commanding Officer: CDR Jerome E. Henderson

Conversion: Williamette Iron and Steel Works,
Portland, Oregon

Commissioned: November 2, 1964

Cost:

COLLECTION CAPABILITY at deactivation

- 10 Manual Morse
- 1 Automorse
- 3 Radiotelephone
- 4 Radioprinter
- 1 NMSD
- 1 R/D
- 1 Telemetry

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USNS VALDEZ (T-AG-169)

Hull Number: T-AG-169

Knot Ship hull type: C1-M-AV1

Displacement: 5,000 tons

Former Name: ROUND SPLICE/JOSEPH J. MARTINEZ

Ship Personnel Allowed: Officers - 11;
Enlisted - 48

NAVSECGRU Personnel Allowed: Officers - 4;
Enlisted - 91

Propulsion: Diesel

Maximum Speed: 9 kts

First Master: William F. O'Reilly

Re-acquired from Maritime Administration in 1959;
returned to Navy in 1961

Conversion: 3,300,000.00

COLLECTION CAPABILITY at deactivation

14 Manual Morse
2 Radioprinter
2 Radiotelephone
1 NMSD
1 ELINT

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USNS MULLER (T-AG-171)

Hull number: T-AG-171

Knot Ship hull type: C1-M-AV1

Displacement: 6,000 tons

Former Name: CHECK KNOT

Ship's Personnel Allowed: Officers - 11;
Enlisted - 48

NAVSECGRU Personnel Allowed: Officers - 4;
Enlisted - 90

Propulsion: Diesel

Maximum Speed: 10 kts

First Master: William F. O'Reilly

Re-acquired Maritime Administration in 1962 -
Reclassified T-AG-171 in 1963

Conversion Cost: 1,891,000.00

COLLECTION CAPABILITY at deactivation

- 13 Multichannel
 - 1 ELINT
 - 2 Radiotelephone
 - 1 Radioprinter

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SECTION 3

MISSIONS

TECHNICAL RESEARCH SHIP MISSION DEFINITIONS

Dedicated seaborne SIGINT platforms have performed four basic missions. These are descriptive not only of efforts in response to national requirements, but also of employment of SIGINT ships in support of Unified and Specified commands and their components in operational situations.

INTELLIGENCE STATION

This mission is primarily concerned with developing SIGINT information to maintain the intelligence base on the target country and may include current reporting. The platform must be configured for volume intercept on fairly well defined nets. The primary purpose is to obtain information carried by the transmissions. Endurance and on-station continuity are prime considerations. The electronic configuration may be determined in advance and is relatively stable for any given set of targets.

Approximately 41 missions of this type were conducted by the ships during the 8 years the program was in effect. The USNS MULLER, operating constantly off Havana, Cuba, logged 6 such missions which lasted nearly 11 months each. The USS OXFORD and USS JAMESTOWN, operating in Southeast Asia, logged the greatest number of individual missions (averaging approximately 1 month each) off the coast of South Vietnam.

CONTINUITY

This mission is typically a sweep operation, which has as its objective, the sampling of a large number of signals to establish continuity on active nets and to detect changes in the communications posture of target countries. The information obtained is primarily technical in nature and serves to develop and maintain the technical data base required for more complete target exploitation.

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Approximately 39 missions of this type were conducted at some time by all the SIGINT ships with the exception of the USNS MULLER. The USNS VALDEZ, USS BELMONT, and USS GEORGETOWN logged the highest number of these missions off the east and west coasts of South America and Africa. This type of mission was frequently combined with another mission (e.g. search/continuity).

SEARCH

This mission is similar to the continuity mission. However, emphasis is placed upon detecting or verifying the presence of signals suspected to be a given location or area by some collateral or other SIGINT source. Characteristic of this mission is an unknown environment with its attendant demands upon the electronic versatility and sensitivity of the intercept systems. Missions of this type would expect to intercept signals from equipment in the R/D phase and from communications systems in the installation and test phase.

Eight missions of this type were conducted by the SIGINT ships. With the exception of the original cruises in areas never before covered, pure search missions were rare. The search mission was usually combined with another (e.g. the USS BELMONT's Mediterranean cruise in 1969 for coverage of the Soviet Fleet was a combination search and continuity mission).

QUICK REACTION

This mission is primarily concerned with the intercept of high priority signals of a specialized nature and normally of short duration. The intercept platform must be in position at the proper time in order to make the intercept. Normally, the signal environment to be encountered is fairly well defined. The time of occurrence is often not well defined, and tip-off, while it may be available, might vary from minutes to days.

There were 6 such missions conducted by the SIGINT ships. They include the OXFORD's deployment to the Bay of Begal in 1965; GEORGETOWN's diversion

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to the Mediterranean for coverage of [redacted]
[redacted] USS BELMONT's diversion to the
Dominican Republic in 1965, to the [redacted]
in 1967 for [redacted] and to the Indian
Ocean for Soviet space vehicle coverage in 1968;
and the LIBERTY's diversion to the Mediterranean to
cover the Arab-Israeli war in 1967.

EO 3.3b(3)
PL 86-36/50 USC 3605

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SECTION 4

HISTORY OF

USS OXFORD (USN-850)

EO 3.3b(3)

PL 86-36/50 USC 3605

SHAKEDOWN AND FIRST DEPLOYMENT

The USS OXFORD, converted from a Liberty hull to a Technical Research Ship (TRS), was the first U.S. Navy vessel specifically configured for full SIGINT intercept operations. Initial plans called for the OXFORD to deploy to the African coast in January 1962 upon completion of its shakedown ops at GTMO. Augmentation of a Latin American TRS collection program however, necessitated the ship's diversion to South America. She arrived on-station in mid-January 1962. The operations area was the east coast of South America between 10-40 degrees South, and operational guidance was provided in DIRNAVSECGRU Research Operations Order 4-61.

An evaluation of the OXFORD's first two cruises indicated that valuable intercept, not obtainable from shore based stations, could be collected by a shipborne platform. During the initial cruise, the ship was tasked with determining the signal environment of Caribbean target countries. Though much of the intercept at the 12 manual morse positions was duplicated by regular sources, valuable and non-duplicative cover was obtained on Ecuadorian police, [redacted] communications, and Polish shipping communications relative to that country's merchant ship positions in Cuban, West Atlantic, and the South American East coast. In addition, the Cuban VHF traffic, was of high interest to consumers.

The OXFORD's deployment to South America provided much back-up information on Soviet bloc [redacted] communications in Latin America, fifty percent of which was unique. One of the highlights of the mission was the first noted intercept of a microwave net operating between Rio de Janeiro and nearby areas. [redacted] entities intercepted during the deployment yielded over 200 [redacted] messages of interest.

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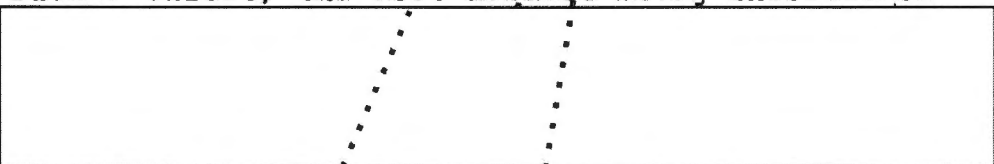
EO 3.3b(3)
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THIRD DEPLOYMENT

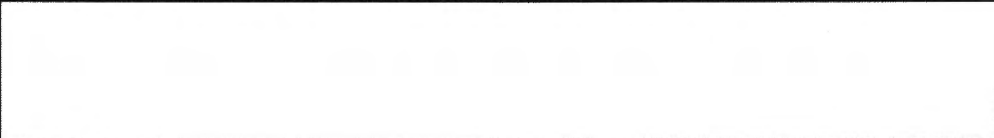
DOD tasked DIRNSA in early 1962 to develop a plan to maximize the U.S. SIGINT posture against Cuba. Once the necessary technical reconnaissance was completed and while efforts continued to provide a specifically configured ship for this operation, the OXFORD was deployed against the Cuban microwave system on 16 July 1962.

Early in 1963, the USNS MULLER (USN-856) was designated as the permanent collection platform for Cuban operations. The OXFORD was then made available for other operations.

While on-station off Havana, the OXFORD made numerous significant contributions to the national SIGINT effort, the most notable being information



Intercept provided 98% of the information to up-date and maintain the Cuban disposition of forces. OXFORD intercept also provided information on Soviet trawlers in the Caribbean as well as other information of high consumer interest, e.g. internal economic problems, counter-revolutionary attempts, recovery of the



SOUTH AMERICAN DEPLOYMENTS

From May 1963 to December 1964, the USS OXFORD was deployed against South American targets of interest. An evaluation of the ship's efforts during this period revealed the following accomplishments: a Brazilian joint service, plus police net was developed; police nets were noted passing large volumes of military traffic; information was gained concerning the partial reorganization of the Argentinian Air Force; a radioprinter circuit between Buenos Aires and local urban areas was intercepted for the first time (this net also was noted passing traffic in both voice and morse and using the same frequency and call signs); intercept expanded the overall communications knowledge of many South American countries and

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provided a solid base for future development/ intercept of non-morse signals; of 74 multichannel links intercepted, 43 were unique and almost half of these contained military/governmental traffic. The countries involved included Chile, Peru, Ecuador, Panama, Colombia and Venezuela.

AFRICAN DEPLOYMENT

After the completion of a yard overhaul (December 1964 - January 1965), the OXFORD was made available for deployment to Africa. The ship's collection capability at this time included 7 manual morse, 4 radiotelephone (HF/VHF), 1 radiotelephone (VHF), 3 single change radioprinter, 2 automatic morse and 2 ELINT positions. Enroute and while on-station, the ship made port calls at Las Palmas, Lagos and Durban.

PLANS FOR DIVERSION OF THE USS OXFORD

Early in 1965, discussions were held concerning the deployment of a TRS to Southeast Asia. These discussions were the result of CINCPACFLT expressed interest in VNG maritime infiltration communications, and CNO's concern over the existing Southeast Asian collection capabilities. The use of a TRS in this area, as a contingency back-up for Phu Bai, had long been under consideration at NSA but targeting against maritime infiltration communications had not been considered.

As a result of these discussions, CNO was requested to provide DIRNSA with a specific proposal for the diversion of a TRS to Southeast Asia so that impact on other SIGINT missions could be assessed. CNO proposed the diversion of the OXFORD and it was agreed that the use of this ship would be less disruptive to the overall TRS program.

On 3 April, CINCPAC, in a message to JCS, endorsed a CINCPACFLT proposal to deploy two Technical Research Ships to the PACOM area. The ensuing exchange of messages among DIA, USIB, JCS and DIRNSA, resulted in a meeting of USIB on 9 April, at which time the proposal received a general concurrence. JCS then formally requested that CNO transfer two TRS's to CINCPAC as soon as feasible.

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In line with the proposal and its subsequent endorsement, DIRNSA recommended to JCS that general guidance be issued to appropriate commands concerning the purpose, nature and concept of TRS operations. JCS, in June 1965, issued the guidance (with modification) for TRS operations in Southeast Asia. The guidance outlined NSA and Command responsibilities and procedures for the planning and approval of TRS operation in Southeast Asia.

Though NSA had recommended that operational and technical control of the OXFORD's SIGINT activities be exercised by DIRNSA, JCS preferred control be exercised by DIRNSA through DIRNAVSECGRU to the NAVSECGRU detachment on the ship. JCS guidance addressed itself specifically to the OXFORD.

In September 1965, DIRNSA recommended the guidance be made applicable to all SIGINT ships deployed to Southeast Asia for similar purposes.

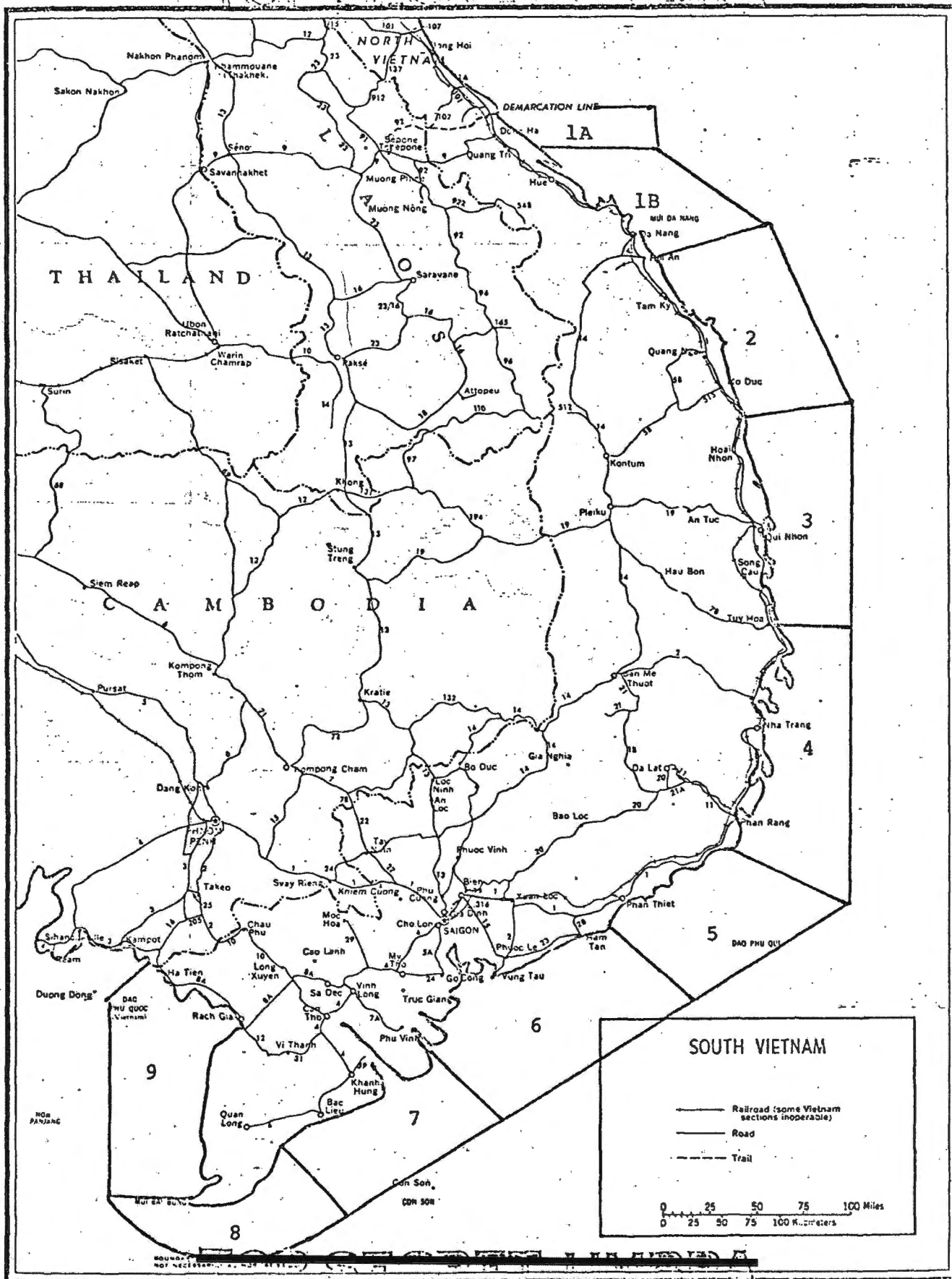
SOUTHEAST ASIAN DEPLOYMENT

The OXFORD was deployed to Southeast Asia and departed South Africa on 4 May 1965, arriving Subic, P.I. on 3 June. In late July, the OXFORD made its initial deployment to the Market Time Areas of Southeast Asia (Market Time Areas (MTA)) represent a geographical division of the coast of South Vietnam and Cambodia into nine operating reference areas, see page 20-21).

Upon completion of its initial deployment, the OXFORD was diverted to the Bay of Bengal to conduct a 21 day hearability test. The test (Project HEALTHY) was made necessary by the possibility of the loss of the U.S. SIGINT site at Peshawar, Pakistan (USN-60).

In reviewing the results of the test, certain inhibiting factors were taken into consideration. The monsoon season affected the Bay of Bengal area during the test period causing considerable signal attenuation. This condition prevailed approximately 8 hours daily, with interference greatest during daylight hours. The WC targets, active basically in daytime, were therefore not heard. Western China targets were not heard with same degree of regularity as USA-60, but Project HEALTHY did exhibit the ability of the ship to hear, to some extent, targets originating in all areas of China. In summary, while the

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Coordinates for the MARKET TIME AREAS are:

AREA	COORDINATES
1A	17-00N/Coast 17-00/108-31E 16-50N/108-31E 16-50/Coast
1B	16-50/Coast 16-50/108-31E 16-09N/109-10E 15-41/Coast
2	15-41N/Coast 16-09N/109-10E 14-45N/109-45E 14-46N/Coast
3	14-36N/Coast 14-45N/109-45E 12-55N/11008E 12-55N/Coast
4	12-55N/Coast 12-55N/110-08E 10-53N/109-34E 11-20N/Coast
5	11-20N/Coast 10-53N/109-34E 10-11N/108-40E 10-44N/Coast
6	10-44N/Coast 10-11N/108-40E 09-02N/107-10E 09-35N/Coast
7	09-35N/Coast 09-02N/107-10E 08-41N/106-42E 08-25N/106-09E 09-00N/Coast
8	09-00N/Coast 08-25N/106-09E 07-57N/105-06E 07-57N/104-33E 08-27N/104-20E 08-36N/Coast
9	08-36N/Coast 08-27N/104-20E 10-18N/103-38E 10-24N/103-51E Then on a line to coast at Cambodia - SVN border.

NOTE: Area 9 runs along north coast and down east coast to DAO PHU QUOC (island in Gulf of Thailand) to a point SW of Cambodia-SVN border and then NE to coast at border.
REF: COMSEVENFLT 240558Z DEC 65, AGI 80926

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length of the monsoon season (6 months) would adversely affect sustained collection, it was determined that in order to provide conclusive results, an extended test was necessary.

The OXFORD returned to the MTAs for a short period and then departed for Sasebo for an extensive yard overhaul (December-January 1966). While enroute Taiwan, the OXFORD conducted a search of the CHICOM SIGINT environment (15 February - 05 March 1966). Numerous intercepts were made in the VHF R/T mode, but CHICOM Naval activity proved sparse. It is conceivable that a CHICOM Naval communications stand-down resulted from the OXFORD's presence, since the OXFORD was kept under close surveillance by CHICOM Naval units. The OXFORD did however prove the capability of sea-borne SIGINT platform to intercept CHICOM VHF communications.

Throughout 1966, the OXFORD operated primarily in the MTAs providing coverage of Southeast Asian target entities as well as [redacted] originating in this region. The countries covered included Burma, Cambodia, North and South Vietnam, and Thailand.

In mid-October 1966, the OXFORD was tasked to provide coverage of Philippine communications during the visit of President Johnson to that country. The ship was required to intercept, process and report on Philippine internal communications with emphasis [redacted]

During the task (approximately seven days) several NSA personnel assisted USN-850 in carrying out its mission.

The OXFORD's operations in Southeast Asia in 1966 resulted in a series of firsts: a DRV message forwarning of B52 strikes; unique Viet Cong transmissions; Viet Cong maritime infiltration communications; internal communication changes within the DRV; Cambodian multichannel communications from MR II; Cambodian Naval VHF multichannel communications; and [redacted] radioprinter activity.

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Through most of 1967, the USS OXFORD continued to operate in the Market Time Areas. In February 1967, USM-704 recommended the two TRSS in SEA (OXFORD and JAMESTOWN) be included in the Southeast Asian Technical Summary (SEATS) Program in order to provide them with a more rapid technical feedback.

After all possible problem areas had been resolved, DIRNSA concurred with the recommendation (July 1967).

During this year, USN-850 participated in several special operations. One mission was conducted along the China coast while the ship was enroute from Yokosuka to MTA-1, and the other was a special SIGINT support mission (Project RANCHER), conducted in MTAS 6/7 to cover Vice President Humphrey's visit for the inauguration of the President of South Vietnam.

Beginning in September 1967, as a part of a massive coordinated effort to exploit Viet Cong communications in MRs 8/9, ten manual morse positions on-board the OXFORD were placed under the CMA of USM-626. As a result of the effectiveness of the operation, DIRNSA concurred in keeping the positions under the CMA of USM-626 when the ship operated in that site's area of responsibility.

As a commentary on the complexities of shipborne operations, it was noted in a USM-626 evaluation that though USN-850's operators were capable, their proficiency was inhibited by the constant changes in emphasis from one country to another in a relatively short period of time resulting from the rapid movements of the ship in response to tasking requirements. The problem proved unresolvable as long as the ship continued to be involved in mobile seaborne operations in a dynamic signal environment.

Between November 1967 and early 1968, action was taken to provide both the OXFORD and the JAMESTOWN with a monitor and tip-off capability in support of the ARDF effort. This airborne DF support, to and from ground based sites, required both ships to have a transceiver capability compatible with the KY 8/28, to provide secure voice communications between the ships and the planes involved. The initial equipment

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was on loan from NSA until October 1968 when COMNAVSECGRU made the requisite equipment available to both ships.

In November 1967, correspondence was initiated among NSA, NSAPAC, NRV ~~lot~~, and CINCPACFLT, relative to an NSA request for longer on-station time for the Southeast Asian TRSs. The NSA objective was to ensure both maximum coverage from MTA 6/7, and from MTA 9 for the Cambodian collection until an adequate ground based site became available.

In view of the PAC Command's anticipation of a possible morale/material problem, and in light of projected plans for a February 1968 opening of a SIGINT facility on Black Widow Mountain, NSA agreed not to press for a longer on-station period.

In view of the possibility of the loss of some SIGINT facilities in South Vietnam due to enemy action, NSA, in January 1968, drew up contingency plans for additional TRS coverage in SEA. DIRNSA requested JCS take the necessary actions, in accordance with NICE TIME procedures, to amend the OXFORD's schedule and return the ship to MTAs 6/7 as soon as possible. Permission was also sought, and received, to have the ships off-load their courier material for ARFCOS delivery, at Danang. The only limiting factors were: (1) the ship was only permitted to enter the Danang Harbor during daylight hours and, (2) visits on a daily basis were not to establish a time pattern.

In February 1968, USM-808 was designated CMA for the TRS M/M positions while the ships operated in MTA 2. At this time the ship had available for tasking, eleven morse positions (16/17 DHOC) and two morse positions (24 DHOC).

In the same month, as a result of the PUEBLO incident and the subsequent CNO directive, USN-850 took measures to reduce its classified document holdings and notified CNO of its intentions to off-load excess material at Subic. The OXFORD thereafter limited its crypto material to the current systems plus two months reserve on board.

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CHANGE TO SCHEDULING PROCESS

In March 1968, HQNSAPAC, reviewing NICE TIME procedures, noted that in response to a DIRNSA request for a ship diversion, a total of 57 hours elapsed prior to the ship getting underway. The delay was, in part, a result of a delayed CINCPAC response to the DIRNSA request, and in part, the number of Commands through which the request had to pass. Investigation revealed overall coordination time could be reduced to a possible 32 hours in future requests, but any less time would require a drastic change in NICE TIME procedures and a curtailment of some Navy command authority over TRS movements.

One suggested solution was to have DIRNSA levy its requirements for a monthly coverage within general MTAs 1-9, and specify areas of desired emphasis. The suggestion was accepted and in May 1968, DIRNSA indicated that monthly schedules developed and proposed by COMSEVENTHFLT should recommend operations in MTAs 1B-9, with primary emphasis in MTAs 6/7. MTA 1A was excluded since such operations in this high risk area would require JCS approval. The monthly schedules were to indicate also that requests for changes in primary operations areas would be forwarded to COMSEVENTHFLT by DIRNSA. This was later amended to permit change recommendations by NRV (C) and by HQNSAPAC, these organizations being capable of providing the most immediate response to J2, MACV needs.

After several months of planning, Project HOMESPUN was scheduled to be implemented aboard the two SEA TRSs (August 1968). HOMESPUN was an integrated search and acquisition plan for morse intercept positions not normally tasked with search; its purpose, to increase the effectiveness of morse intercept through coordination of positions when the primary or alternate targets were inactive or uncopyable. HOMESPUN required assigning a narrow band of frequencies to each position involved. The requisite operating procedures were forwarded to the ships by DIRNSA and arrangements made for training personnel aboard each ship by the NOJ MSD representative in September 1968.

After completing operations for the first six months of 1968, the OXFORD provided an electrical resume of conclusions reached during that period.

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EO 3.3b(3)
EO 3.3b(6)
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The validity of the assumption that a shipborne platform could play a dual role was unquestioned; the dual role being that of a contingency platform and an augmentation to shore-based sites. The major areas of interest, MTA 1/2/6/7/, proved fully exploitable by a TRS.

An increased level of expertise among the ship's operators and analysts was attributed in great part to longer operating periods in each area and to an ever closer collaboration among the ship and the shore based sites which helped provide valuable aid to the ship when it operated in the Delta region. This assistance also included hardcopy working aids from USM-626, short periods of TDY to the ship by knowledgeable personnel from USM-626, electrical support and SEATS feedback from DIRNSA and technical support [redacted]. The period reflected a continued increase in collection effectiveness (morse/non-morse), increased efficiency in ARDF operations, and a gain in the OXFORD's list of continuities on VC targets.

Some definite conclusions reached from evaluation of TRS operations in Southeast Asia were as follows: the authorization for more flexible ship movements within the limits prescribed by CMA/NRV (C) within the MTAs represented a step toward a more successful use of the Southeast Asian TRSSs; minimum periods of operations within an area should be 20 days whenever possible; TRSSs should be permitted to move when necessary, to meet collection requirements; close collaboration with in-country CMAs is vital to successful ship operations; selected areas and targets should be determined far enough in advance to permit complete and orderly technical support from in-country CMAs.

In August 1968, a "Guide for Technical Research Ships and CMA's When Operating off South Vietnam" was published by NRV ~~for~~. The purpose of the guide was to provide a concept of SIGINT resources employment on-board TRS's operating in SVN waters. Included also, were specified geographic areas and positions, for which USM-808/626/604 were to provide tasking. With DIRNSA's concurrence, operational control was to be exercised by the Unified Commander.

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In September 1968, a message from CINCPACFLT to CINCPAC pointed out another problem concerning NICE TIME scheduling. Too many offices were involved in schedule changes, however minor. In the case of PACFLT TRSSs, a total of seven offices, up to the JCS level were involved.

It was proposed that COMSEVENTHFLT schedule and issue sailing orders for the Southeast Asian ships on a monthly basis, subject to modification by the senior Commanders. The proposal was based upon PACFLT's position that the ships operated on somewhat standardized schedules, primarily in Market Time Areas to and from liberty and overhaul ports. CINCPAC's response to the proposal was negative, based upon his concern that the Southeast Asian TRSSs would become another COMSEVENTHFLT resource. Additionally, it was felt that the suggested procedures would not permit the desired monitoring of schedules.

Responding to a DIRNAVSECGRUPAC query concerning the tasking of Southeast Asian TRSSs with non-military targets, DIRNSA stated that the ships aperiodic on-station periods couldn't provide sustained cover of tactical military targets of direct concern to tactical field commanders. This would require day-to-day continuity, which land based sites could best provide. The ships could best assist by relieving the land-based sites of some non-military and developmental targets, permitting the stations to cover more effectively, the low-level, low-powered communications of direct concern to tactical field commanders.

The OXFORD remained at Subic Bay, P.I. for an extended period (August - September 1968) while repairs were made to the engine. Normal MTA operations were not resumed until 25 September at which time, the OXFORD transited MTA 6/7. Project HOMESPUN scheduled for implementation in August was finally implemented in late September 1968 and was reported by the ship as successful in accomplishing its objectives.

In summarizing the fall cruise results, the OXFORD considered its collection above normal and attributed this, in good part, to TDY visits to the ship by in-country SIGINT station personnel whose expertise provided to be valuable. In addition, the establishment of the ARDF position and an OPSCOMM circuit tended, from the ship's viewpoint, to empha-

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size the gradual transition of the Southeast Asia TRS role from that of a strategic to a tactical SIGINT support unit.

In early November, the Cambodian tasking assigned when the OXFORD operated in MTA 9, was dropped and replaced with VC communications tasking. This new assignment in MTA 9 was in support of Allied tactical operations in IV Corps areas south of Saigon. The operation, "SPEEDY EXPRESS" was scheduled for 18 December 1968 through 15 February 1969. The diversion of coverage, initially intended as a temporary measure, was continued after the termination of operation.

The first successful OPSCOMM circuit schedule between the OXFORD and USM-626 occurred 3 December 1968. Prior to this, scheduled communications were either unsuccessful or were not attempted due to power supply problems at USM-626. The 1200Z schedules proved successful but circuit quality remained marginal throughout the existence of the OPSCOMM circuit.

DEACTIVATION

The USS OXFORD continued operations in the Market Time Areas off South Vietnam until November 1969. Tasking was for the most part routine in nature and there was no requirement for diversion of the ship during the last months of operations. Mission objectives for TRSs in SEA was published in January 1969.

In August, CNO published its 703 list of ships to be inactivated as a result of the DOD budget cut. The USS OXFORD, as well as all the TRSs were included in the list. Despite NSA efforts to retain the shipborne platforms, programming for the deletion of the ships from Navy's inventory was completed.

On 20 October, the USS OXFORD departed her operations area and sailed to Yokosuka, Japan to commence stripping and deactivation. The ship was stricken from the Navy ledger and stripped for resale.

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USS GEORGETOWN (USN-852)

On 2 January 1964, the USS GEORGETOWN departed Portsmouth, Virginia enroute to Guantanamo Bay for three weeks of general shakedown training exercises. On completion of the training period, the ship proceeded to Montego Bay, Jamaica and then to Key West, Florida.

During transit full emphasis was placed on official SIGINT operational training exercises. A complete peripheral sweep of the Southern coast of Cuba was conducted from a distance 5-12 NM as safe navigation would permit; while, at the same time, allowing sufficient flexibility to devote additional time in known or suspected areas of high SIGINT activity. After spending periods of up to 24 hours off Cienfuegos, Isle of Pines, Cabanas, Mariel, and Havana, the GEORGETOWN arrived in Key West 6 February 1964.

FIRST RELIEF OF THE USNS MULLER

On 18 April 1964, the USS GEORGETOWN relieved the USNS MULLER in the operations area off Havana, Cuba. USN-852 was tasked with the intercept and processing of Cuban internal communications; primarily [redacted] UHF microwave, VHF single-channel and multichannel communications and HF communications utilized by the Cuban Army, Navy, Air and para-military units. They were also tasked with processing and reporting perishable items within 12 hours of intercept. In addition to the assigned mission, USN-852 personnel conducted a search mission during off-duty hours which resulted in the intercept of unique communications.

The GEORGETOWN's Cuban mission ended on 26 May when the ship was relieved by the USNS MULLER and sailed to Norfolk.

INITIAL SOUTH AMERICAN DEPLOYMENT OF USS GEORGETOWN

The USS GEORGETOWN deployed to the north and eastern coasts of South America June - October 1964 and was targeted against Argentina, Brazil, Chile, Colombia, Paraguay, Uruguay and Venezuela.

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Evaluation of the mission revealed the following: Intercept by USN-852 greatly assisted in broadening NSA's technical base relative to internal communications of assigned target areas and in confirming T/A conclusions based on communications observed during previous TRS cruises. Quality of multichannel intercept was poor due to incorrect recording procedures probably as a result of a lack of understanding by USN-852 personnel. However, USN-852 provided the initial intercept of Uruguayan Naval Air communications, initial intercept of Brazilian Naval HF printer communications between Brazilla, Rio de Janiero and Recife, and identification of second and third echelon units on Brazilian Army communications; isolated thirty Brazilian police units and confirmed the location of thirty-four radio stations; provided initial intercept

THIRD DEPLOYMENT OF THE USS GEORGETOWN

On 5 January 1965, the USS GEORGETOWN departed Norfolk, Va. to conduct special operations in the Caribbean area and along the Central and South American coasts. The cruise was divided into three phases: (1) between Norfolk and 72 degrees West off the coast of Venezuela via Trinidad; (2) between 72 degrees West and 2 degrees North off the coast of Colombia; and (3) between 2 degrees North and 3 degrees South off the coast of Ecuador.

The primary mission was to update and increase technical knowledge of communications facilities in this area. Target countries included Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Venezuela, Ecuador, Peru, Bolivia, Chile and Argentina.

The mission was accomplished in all aspects with the exception of the VHF/UHF multichannel assignment. Specific contributions by USN-852 were as follows: intercept of the Special Central American Telecommunications network that gave a suggested network format for future operations; coverage of Venezuelan naval

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communications during January which made a significant contribution towards the recovery of their quarterly changing callsigns; and 22 end-product reports/translations issued by USN-852 which served as a basis for further T/A development on the target countries.

The ship's schedule was modified in order to provide approximately two weeks in the Cuban area before returning to Key West on 30 March 1965. The change was made so that USN-852 could check the signal environment and survey target hearability because of pertinent developments in Cuban communications, a cutback in ACRP flights to Cuba and the necessity to review Cuban signal environment. In order to do this, operations off the west coast of South America were deleted allowing a total of 14 days vice 6 for circumnavigation of Cuba.

On completion of this mission, the ship returned to Key West for 2 days and then relieved the USNS MULLER off Cuba. The USS GEORGETOWN remained on station until relieved on 8 May by the USNS MULLER and then proceeded to Norfolk.

During the circumnavigation search mission, the ship was assigned a fairly restrictive track with the following results: Manual Morse productivity was considered good in view of the fact that six positions were tasked with Cuban military TEMPO cases with little technical information available; no [] activity was intercepted; 100 VHF links of the [] were sampled; 2 links of the UHF trunk of the [] system were intercepted in the vicinity of Santiago de Cuba and Matanzas; 10 low VHF (30-50Mhz) signals were intercepted; no significant intercept of [] was accomplished; and participation in the CINCLANT Advisory Warning Plan (CLAWP) was limited to two GOLDEN TREE missions.

During the relief of the MULLER, USN-852 experienced technical difficulties in collection of the [] which took approximately two weeks to correct; voice transcripts, decryption, selection and forwarding was considered very good; steady improvement in end product reporting was noted as the station became more familiar with the traffic, and performance during participation in the CLAWP was excellent.

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SOUTH AMERICAN DEPLOYMENT 1965-1966

On 14 December 1965, the USS GEORGETOWN departed Norfolk, Virginia enroute South America. As in previous deployments, the cruise was divided into three phases to facilitate tasking. Target countries included Haiti, Venezuela, Colombia, Ecuador, and Peru, and assignments included conventional HF and VHF single channel, HF ISB multitone and VHF/UHF multichannel communications.

Contributions by USN-852 during the mission included: intercept of all assigned HF communications in Haiti with the exception of the Naval network; excellent coverage of second echelon and national guard nets of Ecuador; maintenance of continuity during a scheduled callsign change on Ecuadorian Naval nets; intercept of

and coverage of considerable single channel Colombian voice activity in both HF and VHF range.

The GEORGETOWN returned to Norfolk on 7 March 1966.

RELIEF OF THE USNS MULLER MAY-JULY 1966/LATIN AMERICA
JULY-AUGUST 1966

On completion of upkeep, the USS GEORGETOWN departed Norfolk 17 May 1966 enroute the Cuban operations area to relieve the USNS MULLER. During this mission, the MULLER loaned certain equipments to the GEORGETOWN to enhance her collection capability in the specialized signal environment of the Cuban area. The equipment was transferred back to the MULLER when she in turn relieved the GEORGETOWN in July.

During this Cuban mission, USN-852 intercept provided valuable information concerning the response of all Cuban forces to the state of emergency in Cuba which was occasioned by the Guantanamo Naval base fence incident (NSA's SIGINT readiness BRAVO Appetite) that began 27 May and continued into the first week of June. This included details on the mobilization of reserves, the posture of Cuban defenses and status of logistics support.

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During the state of alert, USN-852 produced SIGINT on the response of the Cuban Air Defense (DAAFAR) organization including deployment of personnel from the DAAFAR Command posts to reserve positions. Available by-product of the alert was a list of chemical defense equipment submitted by the eastern sector DAAFAR Commander. This was the first reference in COMINT to Soviet made chemical decontaminators in Cuban DAAFAR elements. Intercept by USN-852 revealed that the Siguanea SAM site had been relocated on the Isle of Pines, and [redacted] communications were intercepted relating to the attack on a small surface craft attempting to penetrate Havana defenses on the night of 29/30 May.

Because of the SIGINT readiness Alfa, the GEORGETOWN was extended on station. The ship was unable to resume normal operations off Central America until 20 June. Intercept of Mexican and Central American targets began on 11 July 1966.

Intercept of Mexican air and second echelon Army Communications provided new frequencies, callsigns, and locations, but no further intercept was reported on military air voice, comms or other special targets; Guatemalan military intercept was limited mostly to two cases; there was limited intercept of Nicaraguan military voice; intercept of El Salvadoran police traffic on 22-23 July which was all unique, intercept included a new VHF voice frequency 45.6 Mhz and six new call-

[redacted]

On 23 August, the USS GEORGETOWN arrived in Norfolk where she remained in port until 4 October 1966.

SOUTH AMERICAN DEPLOYMENT OCTOBER - DECEMBER 1966

On 4 October 1966, the USS GEORGETOWN departed Norfolk enroute South America. This cruise was divided into two parts: (1) between NORVA and the Panama Canal Zone and, (2) between the vicinity Panama Canal Zone and Barcelona, Venezuela.

The tasking guidance provided for maximum flexibility with primary emphasis on the development/exploitation of targets in Venezuela, Colombia, Costa Rica, Nicaragua, Honduras, El Salvador, Guatemala, and Mexico.

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The USS GEORGETOWN returned to Norfolk, Va. on 21 December 1966.

SOUTH AMERICAN DEPLOYMENT MARCH - MAY 1967

The USS GEORGETOWN departed Norfolk 7 March 1967 for deployment to South America. As in the previous deployment, this cruise was divided into 2 phases:
(1) between NORVA and vicinity Panama Canal Zone and,
(2) Panama Canal Zone and 1 degree North off the coast of Ecuador.

USN-852 was tasked with developing the internal communications of Venezuela, Colombia, Guatamala, Nicaragua, Panama Ecuador and [REDACTED] communications.

On 25 March the GEORGETOWN suffered a boiler blow-out off Maracaibo, Venezuela. There were no personnel injury but damage to the ship necessitated her return to Cristobal, C.Z. on 31 March where she remained under repair until 15 April 1967.

MULLER RELIEF MAY - JUNE 1967

On 15 May, the USS GEORGETOWN, having completed a 53 day collection effort against South/Latin America, relieved the USNS MULLER in the Cuban operations area.

As in the previous relief mission, the USNS MULLER loaned equipment and manuals to USN-852 so that the Cuban SIGINT mission could be accomplished more effectively.

On 23 June, the USNS MULLER returned to station and the USS GEORGETOWN sailed to Norfolk.

SOUTH AMERICAN DEPLOYMENT - NOVEMBER 1967

The USS GEORGETOWN departed Norfolk, Va. on 16 October enroute the Fleet Training Center at Guantanamo Bay for two weeks underway refresher training (23 October-3 November). During this period, limited collection and search operations were carried out against selected Cuban targets.

Subsequent to a Kingston, Jamaica port call (4-6 Nov), PHASE I (between GTMO and Panama Canal Zone) of the South American deployment commenced. The ship operated consecutively off Haiti, Santa Marta, Colombia; Barranquill Cartegena; and in the Gulf of Morrisquillos before arriving at the Navy Station at Rodman on 21 November.

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On 22 November, the USS GEORGETOWN commenced Phase II operations (between Panama Canal Zone and 19 degrees South).. Two days later in response to a MOVORD, the ship retransited the Panama Canal and resumed Phase I operations. On 25 November the GEORGETOWN was directed to proceed at best speed to Rota, Spain. Latin America operations were terminated at this time.

MEDITERRANEAN DIVERSION AND DEPLOYMENT - NOV 67-MAR 68

On 24 November, the Turkish-Greek situation on Cyprus had deteriorated to a point where diversion of the USS GEORGETOWN to the Mediterranean was essential to ensure availability of adequate collection resources if land-based sites in the area closed.

On 25 November, the GEORGETOWN received orders to proceed to Rota, Spain directly and remain there until her mission was provided. CINCUSNAVEUR's OPORD 260-67 established policies and procedures for the planning, scheduling and control of the GEORGETOWN while operating as a unit of COMSIXTHFLT.

Because of the adverse political considerations in Spain, the ship was directed to sail to Naples, Italy vice Rota, Spain. On 17 December CINCUSNAVEUR assumed OPCON of the GEORGETOWN.

Technical support and tasking guidance for the mission was provided to the ship while in port Naples.

As noted above, if the Crete/Cyprus sites were lost, the ship would have had to assume as much of their mission as possible. However, tension had decreased by the time the ship arrived; therefore, it continued on to a two phase operation to prepare for future contingencies. Phase I positioned the ship in a central area in the eastern Med to conduct hearability/capability tests on Cyprus/Crete targets. Phase II called for coastal operations from [redacted] and return. During this phase, emphasis was on targets in the VHF/UHF range, inaccessible at ground based sites. Coverage encompassed the UAR and Syrian air/air defense systems which had been in constant state of flux since the June war. Other targets included the Syrian multichannel system, the UAR multichannel system [redacted]

On 26 December, the GEORGETOWN sailed from Naples enroute her operations area (4F) but was forced to return

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the same day because of salt water corrosion in the evaporators and low feed water. Repairs were completed on 31 December 1967.

During the month of January, the ship remained in operations area 4F. The ship returned to Naples on 24 January. Due to adverse reaction to the USS PUEBLO incident, State Department recommended that "... the GEORGETOWN remain in Naples until such time as a reduction in the repercussions from the USS PUEBLO incident make it possible to resume GEORGETOWN's February operations."

The USS GEORGETOWN eventually departed Naples on 6 February 1968 in company with a DD escort which was ordered to remain 10 NM outboard of the GEORGETOWN's track.

Prior to departure, USN-852 was directed to off-load all cryptologic material evaluated as not absolutely essential for the February deployment. USN-852 complied with the directive and submitted inventories of the material removed from the ship.

During her February operations (11 Feb), one UAR Beagle aircraft made 3 low passes over the GEORGETOWN and the USS LAWRENCE. As a result, COMSIXTHFLT took further precautionary measures by placing the USS F.D. ROOSEVELT and her escorts, the USS PUTNAM and USS CONINGHAM on one hour notice in support of the GEORGETOWN's operations; the USS STORMES was assigned as an additional escort to the ROOSEVELT; the USS TALLAHATCHIE COUNTY was put on two-hour standby; one VP aircraft was put on 24 hour coverage to maintain and document a continuous navigational plot of the ship; one SP2H aircraft was assigned to report all surface contacts within 50 NM of the GEORGETOWN; and one VQ-2 aircraft was provided for continuous daylight coverage for warning of enemy action towards the USS GEORGETOWN and her supporting fleet elements during coastal operations.

On 15 February, the GEORGETOWN was directed to conduct the remainder of her mission with a 35 NM CPA to the coast. The ship continued Mediterranean operations until 11 March 1968 when she transited the Straits of Gibraltar where technical materials and aids were transferred off the ship by helicopters. On 26 March the GEORGETOWN arrived in Norfolk.

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Generally, it can be said that Phase I objectives were met and results showed that such a platform would be beneficial in the event one or both of the land-based sites involved were lost. The intelligence objectives of Phase II were not met because of the imposed restraints. During Phase II the mission was clearly affected by the CPA to the degree that none of its VHF/UHF assigned mission was accomplished. It is believed that the coastal operation from [redacted] would probably have proved more beneficial on the reverse run but due to the situation, the ship was ordered to end its cruise at Latakia and withdraw from the area.

MULLER RELIEF - JUNE-August 1968

In May 1968, DIRNSA proposed the USS GEORGETOWN relieve the MULLER on 15 June to cover the Cuban area until early August when the MULLER would return from overhaul. In addition, a circumnavigation of Cuba and short diversion to the northern coast of South America was proposed.

The mission objectives for the GEORGETOWN's Cuban circumnavigation were: to conduct a directed search of the Cuban electronic environment island wide to isolate new electronic emitters; confirm known emitters; sample areas of the Cuban signal environment not normally collected; isolate new users of known systems; apply special intercept techniques against targets not collectable from existing facilities; and establish Cuban armed forces tactics stressing inter-service activity.

Objectives of Surinam [redacted] collection were: to intercept internal [redacted] communications of Surinam [redacted] which would provide a basis for increased technical and intelligence knowledge of these targets areas; to obtain those communications sus-

[redacted]

Objective of Jamaican, Barbados, Trinidad and Guyana collection was: to search for and develop all possible internal [redacted] communications which might provide a basis for increased technical and intelligence information of the target areas.

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On 30 July, while the GEORGETOWN was operating in the Cuban area, JCS disapproved the proposed circumnavigation of Cuba. The schedule was amended accordingly to reflect only the scheduled Cuban deployment and return to Norfolk. DIRNSA's recommendation to return the ship to port on relief by the MULLER was based on the fact that the ship did not have the technical capability to perform a mission in a new area at that time.

The GEORGETOWN relieved by the USNS MULLER on 1 August, arrived in Norfolk 7 August 1968.

AFRICAN CRUISE - SEPTEMBER 1968 - MARCH 1969

In August 1968, DIRNSA proposed deploying the USS GEORGETOWN to the east coast of Africa to cover, in addition to her normal coastal mission, Soviet ESV and/or CHICOM ICBM activity in the Indian Ocean.

The deployment schedule called for the ship to operate off Trinidad, Guyana, Surinam [redacted] prior to sailing direct to east coast Africa.

The mission objectives for operations off Guyana, Surinam [redacted] were: technical development of Guyana's communication system about which little was known; to intercept and develop internal [redacted] communications of Surinam [redacted] which would provide a basis for increased technical and intelligence knowledge of these target areas; and to obtain those communications suspected of serving [redacted]

Mission objectives of collection against Sub-Saharan African countries while stationed off east coast Africa were: to conduct a directed search of the communications environment of Angola and Mozambique to re-establish known [redacted] networks and to isolate and identify new target entities using known or new communications systems in order to meet specific requirements; and to assist in the maintenance of a SIGINT data base for the following countries: Republic of South Africa, Malagasy Republic, Botswana, Lesotho, Swaziland, Tanzania, Kenya, Uganda and Somali Republic; and to collect information on the following: military or paramilitary forces, communist/ultra-leftist, anti-U.S. and anti-Western activity security/counter intelligence activity, subversive and dissident activity etc.

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Mission objectives when deployed in the Indian Ocean were: collection [REDACTED]

[REDACTED]
of data transmission; preliminary signal analysis; COMINT coverage of [REDACTED]
[REDACTED]

would play in future events; intercept communications from search and recovery aircraft to ascertain movement, tactics and splash-down locations; intercept communications with cosmonauts during re-entry to determine operational status of re-entry vehicle and life support equipment; and ELINT spectrum search for manual parameters of shipborne emitters and for order-of-battle update.

The GEORGETOWN departed Norfolk enroute Trinidad on 17 September and operated in the Caribbean area until 27 October when she sailed for the east coast of Africa.

The ship arrived in Lourenco Marques on 7 October and operated against coastal targets until 11 November when she diverted from Lourenco Marques to cover the re-entry communications of a Soviet Space vehicle expected to launch between 9-11 November.

The GEORGETOWN, directed to attain a position in the Indian Ocean (40S/68E) to collect re-entry data, was unsuccessful in its attempts to reach the appointed position or satisfy the collection requirements.

On 16 November, the ship sailed for the east coast to resume normal operations. A port call was scheduled in Mombasa on 27 November for badly needed waterside/fireside cleaning of boiler and maintenance of the auxillary equipment.

While the ship was returning to the east coast to resume coastal operations, intelligence reflected preparations for another-Soviet space launch in early December. AS a result, the USS GEORGETOWN was directed to sail to Mauritius to prepare for a second diversion on or about 5 December. By late November however, the lack of expected activity in the Indian Ocean indicated that no launch would occur. Accordingly the GEORGETOWN was directed to resume coastal operations as previously scheduled.

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The diversions of the GEORGETOWN brought to light a number of serious problems with regards to scheduling and logistics including uncertain schedules, lengthy deployments, fast reaction to schedule changes, a lack of appreciation for logistic and maintenance needs, and a lack of appreciation of the international ramifications resulting from schedule changes as related to port visits/visas/passport requirements. (Sec. 5, p. 106). CINCLANT considered the problems amendable by simply ensuring that employment of TRSs was commensurate with the ships' capabilities and reasonable fleet standards of operations and maintenance.

On 13 November, the ship reported a boiler outage which the ship's force was able to correct by 16 November. On 8 January 1969, the ship reported the loss of the number 1 diesel generator and engine crankshaft; the latter's repair was not within the capability of the ship's force. The ship also reported that the current mission could be completed based on the schedule termination date (23 January) when the electrical load could be reduced.

At the same time however, it was determined that the Zond series of Soviet space events would result in a lunar operation in the period 30 January - 2 February 1969. Because it was incumbent on NSA to determine the frequency and type of telemetry in use on these vehicles during re-entry from the lunar trajectory, it was requested that the GEORGETOWN be diverted once again to be on station in the Indian Ocean by 4 February to search for telemetry communications in the period immediately after re-entry.

CINCLANT non-concurred in the request due to the condition of the ship's power plant and the ship sailed for Brazil/CONUS on 5 February.

DEACTIVATION OF THE USS GEORGETOWN

The GEORGETOWN arrived in Norfolk on 6 March 1969 after an extended east African cruise.

In June, DIRNSA again proposed the ship circumnavigate Cuba prior to her scheduled relief of the USNS MULLER in early August. Problems with the ship's antiquated engines held the ship in the yards well beyond the scheduled completion date and in August CNO's order to hold the ship in port until further notice and events involving Navy's Project 703 overtook any plans for deployment (see section 6).

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On 17 October, CNO publicly announced the retirement of the USS GEORGETOWN. On 17 December 1969 USN-852 was disestablished.

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USS JAMESTOWN (USN-853)

The USS JAMESTOWN, a converted Liberty hull, began service as a Technical Research Ship on 20 January 1964 when she left Norfolk for shakedown operations in the Caribbean. The five week cruise included stops at Guantanamo Bay, Kingston, Jamaica and a week of operations off Havana.

FIRST DEPLOYMENT

The JAMESTOWN's first full deployment, a scheduled circumnavigation of Africa, began on 9 April 1964. The 130 day deployment covered approximately 31,000 engine miles and took the ship into the Mediterranean, through the Suez Canal, the Red Sea, south along the East African coast, north along the west coast to Sierra Leone and back to Norfolk. Collection capability of USN-853 during this cruise included 10 manual morse, 1 automorse, 1 SIT, 1 ESV, 1 NMSD, 2 R/T, 1 R&D, 1 wideband, and 4 R/P positions.

The deployment area was arbitrarily divided into three parts to facilitate tasking and evaluation: Part I - transit of the Atlantic Ocean to and from the deployment area; Part II - from Gibraltar to Aden; and Part III - from Aden to Freetown, Sierra Leone.

Few intercepts were made during Part I operations, the most significant being a [redacted] net related to test operations [redacted] USN-853 developed and notated this net, which was subsequently given a permanent notation by DIRNSA and assigned at a fixed site.

Part II operations were more productive in as much as the operations area included the entire North African and mid-East coastal waters, as well as the Red Sea area. During this phase of operations, the JAMESTOWN's mission was amended to permit an attempt to intercept a Guidance Missile signal. The signal was believed to emanate from a KOMAR Class Styx missile presumably scheduled for launching during an Egyptian naval demonstration for Soviet Premier Khrushchev. The special mission, "Operation FULLSPEED" proved unsuccessful.

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During Part II operations, the JAMESTOWN was tasked with manual morse and radioprinter HF, radiotelephone HF/VHF, and NMSD search for development of VHF/UHF multi-channel activity in both the Mediterranean and Red Sea areas.

Though some isolated successes were achieved while operating in the Mediterranean, the schedule amendment required by Operation FULLSPEED, affected the overall success of the deployment. The operation did result however, in the first intercept obtained on naval VHF communications used by Egyptian KOMAR Class Rocket Cutters in the Alexandria area. In addition, a large volume of traffic was copied on Egyptian naval HF communications and two new naval links were notated.

From a search and development viewpoint, the most productive portion of the JAMESTOWN's transit was the area between Aden and Sierra Leone. New frequencies and callsigns for Ethiopian, Somali and Cameroon communications, were recovered; a Malagasy internal network,

SECOND DEPLOYMENT

On 13 October 1964, the JAMESTOWN deployed to the West African coast. Its operations area extended from Mauritania to Capetown, South Africa. The primary target countries were the Democratic Republic of the Congo, Angola, and the Union of South Africa.

While operating against the Congo, USN-853 made two major contributions to the national SIGINT effort. The first was the collection of a substantial amount of unique traffic passed by Congolese military manual morse links. The second, the intercept of an [] transmission (a multi-frequency coded system with two tones per character in an 8 x 4 matrix) provided NSA with the first intelligence gained from this type transmission. The ship was commended for its initiative in using a sonograph to break out message preambles, identifying and developing the signal, which was employed as a new means of communications for the Congolese Main Military Group.

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Operating in the areas of Portuguese Guinea and Angola, the ship's efforts were an unqualified success. The Portuguese military network in Guinea was recovered, even after undergoing a complete callsign, frequency, address group and partial structure change. While operating in the Angolan area, 50 radiotelephone nets were intercepted and continuity maintained on virtually every known military, naval and air net in that country. The deployment ended with the JAMESTOWN's return to Norfolk in February 1965.

THIRD DEPLOYMENT

The ship departed Norfolk 23 March 1965, to conduct special operations in the Caribbean area, after which, the ship deployed to South American waters. Operations were conducted along the northeast and west coasts of the South American continent and during transit of the Panama Canal.

The intercept of Dominican Republic communications, including the troposcatter link to Puerto Rico and eleven other multichannel signals proved to be most significant. The technical data base compiled as a result of these special operations, proved invaluable when trouble erupted in the Dominican Republic in late April 1965, and the USS BELMONT was diverted to the area.

While operating off Northern Brazil, USN-853 recovered eleven multichannel signals, including the Alagoas system linking Recife and Maceio. The excellent recordings facilitated in-house NSA processing and greatly aided in the development of Brazilian multichannel systems. Early in May 1965, the initial intercept was made of an Ecuadoran HF printer single sideband (SSB) 4 channel system carrying military, police [REDACTED]

Moving to the Chilean operations area, the ship made the first intercept of an independent sideband (ISB) system connecting the major Chilean military installations. The system, containing six tones in each sideband, passed both military and commercial traffic.

Attesting to the success achieved by the JAMESTOWN on its maiden South American cruise, was the variety of its accomplishments: Recovery of new HF morse, voice and printer activity; fifty-five TEMPO case notations assigned; and eighty-five TEXINS issued on changes in known case

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activity. The ship's Informal Technical Notes (ITN) and Informal Technical Summaries (ITS) were excellent. Information taken from hard copy notes, coupled with traffic forwarded, served as a basis for additional T/A development on assigned countries.

Adjustment of the scheduled track while enroute to Norfolk permitted the ship to pass through the Yucatan channel and Florida Straits, where tasking was levied against Central American targets. The non-productivity of these operations was attributed to the fact that they were conducted on a weekend - normally a relatively quiet period for Latin American communications. The JAMESTOWN returned to Norfolk on 18 July 1965.

DEPLOYMENT TO SOUTHEAST ASIA

During the first quarter 1965, discussions were held concerning the deployment of a Technical Research Ship to Southeast Asia (SEA) (see Sec. 4, p. 18). A relief ship was to be available within six months. On 13 April 1965, DIRNSA recommended to CNO that the JAMESTOWN be selected as the relief ship for the OXFORD; the rationale being the minimal disruption to the TRS program if the JAMESTOWN were chosen. The NSA recommendation was accepted by CNO on 24 April.

The decision was made to allow the JAMESTOWN to complete its then current mission in South America before undergoing RAV in Norfolk (July-September 1965). During this RAV, the ship was provided with HFDF and TRSSCOMM equipment.

The JAMESTOWN departed Norfolk on 22 October 1965, enroute Subic Bay, P.I.. It transited the Panama Canal and stopped at Acapulco, Mexico and Pearl Harbor, Hawaii. During the passage from the Canal to Acapulco, the JAMESTOWN provided excellent coverage of west coast Central American microwave systems.

The JAMESTOWN arrived Subic Bay on 02 January 1966 and departed 06 January on her initial Southeast Asian deployment. Tasking had been forwarded from NSA in December.

Throughout 1966 and the first five months of 1967, JAMESTOWN's operations were routine in nature. Port calls during this period were made at Hong Kong, Subic, Jesselton, Bangkok, Singapore, Kaoshiung, and yard overhaul was accomplished at Yokosuka (February-April 1967).

From 14 June to 03 July 1967, the JAMESTOWN operated in MTA 1 in response to special mission tasking.

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The requirement was to collect SA-2, SAM related ELINT signals as well as related morse, voice, multichannel and other DRV signals of interest. During this period, an NSA radio wave propagation study of the feasibility of intercepting SA-2 related systems in the DRV was completed. From all indications, the wide variance in SA-2 related activity would have afforded the JAMESTOWN some degree of success in accomplishing its mission, had it remained in MTA 1. However, the high risk assessment of a TRS operating in MTA 1, coupled with engine problems aboard the JAMESTOWN, resulted in the ship returning to Subic for repairs. It was not rescheduled to operate in MTA 1 again.

In February 1967, an evaluation of USN-853's contributions to SEA collection, was prepared by DIRNSA for DIRNAVSECGRU. Specific contributions included: the initial intercept of a Cambodian Naval VHF multichannel system on 10 January 1966; a Cambodian military multichannel message of 04 March 1966 outlining measures to be taken in guarding convoys transporting Chinese AID material - the material was to be moved from Sihanoukville to an ordnance depot at Longvek; intercepts of Cambodian manual morse, which contributed, in great part, to basic recoveries of the early 1966 change in Cambodian Signal Operating Instructions; a 29 April intercept contained the first reflection of a newly created Cambodian 38th Infantry Battalion; the JAMESTOWN, on 30 April provided the initial intercept of radioprinter activity on a Burmese Civil Air link (Rangoon-Mandalay) - the activity, intercepted on 8161 Khz, emanated from Rangoon; and, on two occasions in March 1966, the wideband search position (Project PEPPER) intercepted unique Laotian neutralist manual morse activity on 4035 Khz - one of the callsigns employed, had previously been noted in use on a known [] communications group.

The JAMESTOWN was designated as the principal collection and processing station prior to and during the []

[] The schedule was amended to permit the ship to take up station in MTA 6/7 before 15 August 1967. An NSA TDY team was embarked just prior to the ship's arrival in the operations area.

The JAMESTOWN received commendation for its part in making [] a success. The emergency requirements for the project had allowed little lead

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time, yet the ship published forty-two translations and twenty-seven reports covering the period just prior

A similar type operation nicknamed TRUMPET was

Once again the ship received a commendation for the resourcefulness and technical competency of its personnel.

During the JAMESTOWN's late October transit to Kaoshiung, a high priority special collection task was assigned to the NMSD position. The task was necessary because of an existing need for more definitive intelligence concerning possible threats to the U.S., posed by CHICOM weapons systems, both planned and in existence. The following emitters were listed in the special

coverage. This tasking was repeated in May 68 when the ship was enroute to Sasebo.

During Southeast Asian operations, the JAMESTOWN's activities closely paralleled those of the OXFORD. Isolated differences involved special operations during which one ship was on-station and the other in port. OPSCOMM circuit use, ARDF equipment problems, in-country site CMA over designated positions on board ship, scheduling changes, engine malfunctions, etc., represented areas relevant to both ships.

On 24 January 1969, Southeast Asian TRS Mission and Objectives were forwarded electrically to NSAPAC by DIRNSA for further dissemination to the Operational Commands involved. The stated mission was:

(1) To assume contingency cover under appropriate CMA in accordance with the NRV (2) Alternate Intercept Collection Plan (AICP) if fixed sites became inoperable through hostile action or prolonged natural disturbances.

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(2) To otherwise maintain shipborne SIGINT coverage in MTAs 1-9 with primary operations in MTAs 6-9.

(3) To conduct operations in support of National SIGINT requirements simultaneous with and/or a supplement to SIGINT support of U.S. Military Commanders in Southeast Asia.

The general SIGINT objectives were as follows:

(A) North Vietnam/Viet Cong

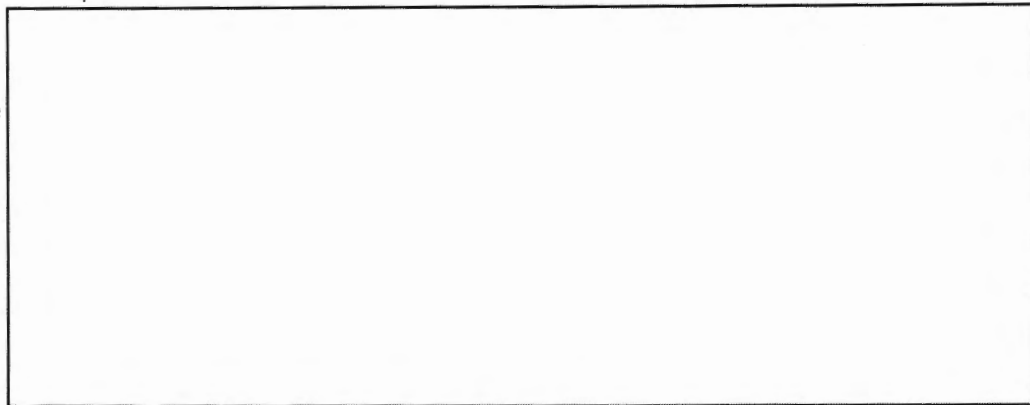
(1) Intercept of VC military, to determine strength, equipment, location, desposition, organization and mission of enemy forces, in realtime support of U.S. Military Commanders requirements.

(2) To identify, catalog new/unusual communications and signal characteristics, known or suspected of emanating from South or North Vietnam and peripheral areas.

(3) To provide continuity and SIGINT technical data on clandestine communications [] emanating from North Vietnam, to stations possibly located in South Vietnam.

(4) To develop and maintain continuity of Public Security voice and morse [] communications between North Vietnam and Public Security stations in South Vietnam and other Southeast Asian nations.

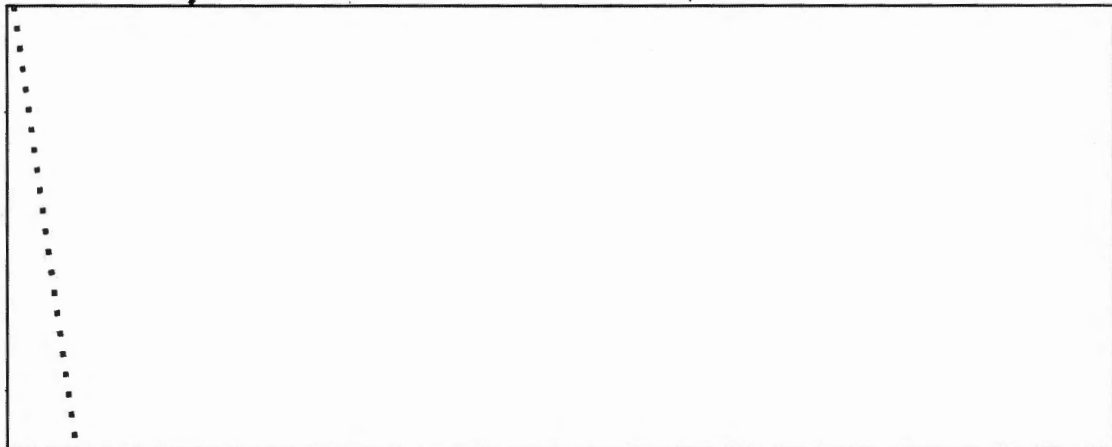
(5) To maintain technical continuity on VC party communications apparatus.



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(C) Cambodian Military/Police/Air/Naval entities

(1) To acquire information concerning Cambodian Army OB, rebel activities, alleged Thai/US/ARVN border violations and other data, as requested by consumers, through the development and maintenance of continuity on selected Cambodian military mainline and internal military region communications.

(2) To determine the organization and activity of Cambodian Royal and National police, through intercept of Cambodian police manual morse, and voice communications.

(3) To develop Cambodian naval dispositions through intercept of Cambodian Navy manual morse and voice communications.

(4) To obtain information on Cambodian air/air defense and the capability/structure of related communications through intercept of Cambodian air, and voice communications.

(5) To provide data concerning overall Cambodian military posture through multichannel communications.

(D) To develop and provide cover on selected printer communications.

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(E) To locate, identify, develop, maintain continuity on [] communications.

(F) To ascertain operational status and capability of [] North Vietnamese non-communications systems and Cambodian air defense associated emitters through ELINT and non-morse search intercept.

(G) To assist U.S. ARDF resources in locating enemy transmitters off the coast of South Vietnam by providing tip-off.

(H) To establish, maintain continuity, and determine operational status and capability of specified signals.

(I) To provide special or contingency support as directed. The mission for Southeast Asia TRSs was amended in February 1969 at the request of NSAPAC to also provide contingency cover, under appropriate CMA, in response to urgent requirements of COMUSMACV as directed under emergency diversion authority of NRV (C).

The JAMESTOWN cruise summary forwarded to NRV (C) and covering the period 8 February - 12 March 1969 provided the following information:

(1) Periodic analyst exchange between the ship and USM-626, coupled with the increasing experience of ship operations personnel, were major factors in the JAMESTOWN's collection effort.

(2) Close liaison between the JAMESTOWN and the OXFORD, proved invaluable in maintaining current records and continuity of coverage; periodic off-station periods didn't materially affect either ship's performance.

(3) An almost daily increase in the number of assigned coverage cases heard was attributed largely to operator familiarity with target area entities and to increased support emphasis by the T/A section. The isolation of back-links increased as operators became more familiar with specific target workings. The USM-626 analysts onboard provided significant assistance.

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(4) The search continued, within MTA 9, to locate the most suitable location for intercepting MR 3 communications along the Delta's western coastline.

(5) In general, MTA 9 operations proved disappointing for non-morse operations; neither the signal environment nor the tasking presented a challenge to the operators.

(6) The working aids included in the SPEEDY EXPRESS support package were found to be helpful. The analytic support from, and the technical exchanges with USM-626 provided the utmost steerage to aid the ship's operators.

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(7) The TRSSCOMM circuit was generally reliable and reduced demands on other circuits; operations were primarily with []

(8) The OPSCOMM circuit with USM-626 proved unreliable despite daily attempts to establish contact.

The JAMESTOWN's Cruise Summary for 01 April - 12 May 1969 recorded the ship's resources targeted against MR 3 targets during the entire period. During this time, Operation SILVER MACE II, a COMSEC operation against allied tactical communications, was implemented. The reporting of Liberation News Agency broadcasts was also implemented.

Reporting of the LNA broadcast required the ship to have an increased translating capability. Accordingly, an intensive language training program was instituted, with USN-27 providing a senior Vietnamese linguist on TAD. The effectiveness of this program resulted in the JAMESTOWN's assignment of LNA reporting authority by DIRNSA.

HOMESPUN search procedures produced excellent coordination and efficiency while proving the value of uniform and standard search procedures. ELINT coverage was unproductive and coverage at the R/T positions showed a decrease in VCRS cases heard. Search and development of VC targets also produced minimal results.

The JAMESTOWN reported its CRITICOMM circuit experiencing frequent outages, and, as was noted in the previous summary, TRSSCOMM was used to pass COMINT traffic, but with the TRSS Guard shifted from USN-27 to []. The OPSCOMM circuit continued to be unreliable. Other ship communications problems included

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atmospheric and equipment failures resulting in numerous outages and large blocks of open numbers on Broadcast coverage. It was necessary to bring up the PACFLT ORESTES system on 29 April to clear a message backlog.

Late in April 1969, NRV (0) provided a copy of an SSO MACV message to SSO CINCPAC outlining the degree of success achieved by TRS operations in Southeast Asia. The use of the two ships in connection with SPEEDY EXPRESS and in close support of MACV had paid off in improved SIGINT support.

The report noted the versatility of the ship in working the various CTZs in preparing for emergency coverage assignments. The most significant achievement noted was the installation and full time manning of an ARDF tip-off and monitor position which allowed the two ships to make a direct contribution to the tactical effort.

The report went on to note that the TRSs in addition to their mobility and contingency response capability, provided facility which could be of great importance under post hostilities conditions since they were not subject to on limited by in-country restrictions.

The JAMESTOWN's operations between January and October 1969 were, primarily routine in nature. On 7 October the ship left Southeast Asia enroute to its annual overhaul at Sasebo. During this period, the decision was made by DEPSECDEF to deactivate all the technical research ships. The ship was then moved from Sasebo to Yokosuka to be decommissioned in mid-December 1969.

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USS BELMONT (USN-854)

The USS BELMONT was the first of the Victory type hulls to be converted to a Technical Research Ship. The ship's maximum speed of 18 knots made it more responsive than previous TRSs to situations requiring swift diversion from one operations area to another.

The initial plans provided for 128 enlisted and 6 officer NAVSECGRU personnel. The collection capability on board consisted of the following: 10 manual morse, 2 automorse, 2 radiotelephone, 1 R&D, 2 single channel printer, 1 two channel printer, 1 wideband, 1 ELINT/telemetry, 1 NMSD and 1 single sideband.

The BELMONT's shakedown cruise to the Caribbean area began on 20 January 1965. Underway training was conducted during daylight hours with the ship returning to Guantanamo each night and on weekends. From 20-26 February, the ship operated in the Havana area and returned to Norfolk on 01 March 1965.

FIRST DEPLOYMENT

The BELMONT's first full deployment, starting on 26 April 1965, was scheduled for the west coast of Africa. However, the ship, enroute to Africa, was diverted to the Dominican Republic to provide coverage of a civil war in that country. NSA support, in the form of technical material and Spanish linguists, reached the BELMONT as the ship passed San Juan, Puerto Rico. The tasking was forwarded electrically to USN-854 on 29 April and the ship took up station off Santo Domingo on 30 April. A SIGINT Readiness VERANDA was established by DIRNSA on 01 May 1965.

The BELMONT's successes in the Dominican Republic area were demonstrated by the rapid adjustment of the NAVSECGRU personnel on board to the new mission. These personnel had been trained for and had on board, equipment and technical aids relevant to west coast African operations. Despite the complete changes in tasking, reporting, processing and traffic forwarding requirements, the BELMONT was able to contribute the most significant hard intelligence on the Dominican crisis. The intelligence was gained from almost daily intercepts of extensive communications between the rebel leaders [redacted]

[redacted] The subjects discussed included military and political planning [redacted]
[redacted]

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While operating in the Dominican area, the BELMONT was also tasked with Venezuelan and Brazilian targets but this effort proved unproductive. The ship returned to Norfolk in July 1965.

SECOND DEPLOYMENT

In mid-September 1965, the BELMONT deployed to South America where it was tasked with developing the internal communications of Haiti and the Dominican Republic while enroute to its operations area, and the communications of Venezuela and Colombia. Specific tasks included the collection of military, [redacted] communications, Latin American shipping and ILC links. This deployment terminated with the ship's return to Norfolk in January 1966.

THIRD DEPLOYMENT

On 16 March 1966, the BELMONT began its third deployment. The ship was assigned coverage of the communications of Venezuela, Chile and Peru. Broad mission tasks included: coverage of assigned cases for intelligence production, with emphasis on multichannel and cipher traffic; national COMINT organizations; Guerilla and illicit organizations, including agents and dissident groups; search and development of new internal Latin American army, navy, air and police communications; development of all military, police and other governmental communications assigned TEMPO case notations for the purpose of broadening the technical base and assisting in the assignment of permanent case notations; search and development of international shipping communications (ILC); and search and development of unnotated ILC communications.

During this deployment, the BELMONT was once again diverted from her assigned operations. This diversion was necessitated by an impending [redacted] in the [redacted]

[redacted] The USNS RICHFIELD, initially assigned to the task was not available until 1 July. Meanwhile, a sustained close-in search/development effort was necessary in early June to cover the preparation stage. The BELMONT, selected to cover this phase until relieved by the RICHFIELD, was extended on station and her scheduled June yard period was deferred.

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NSA provided [] linguists for the operation designated operation CHILI PEPPER. Since there had never been close-in comprehensive intercept effort in this area, it was not possible for DIRNSA to provide detailed SIGINT collection guidance. The BELMONT was tasked with a general/directed search mission to develop these short range communications.

For this operation, the BELMONT and the RICHFIELD were named the UNDERBID platforms while the U.S. SIGINT aircraft involved were designated GARLIC SALT. Tip-off, collection, and processing procedures were designed to permit the UNDERBID platforms to provide sufficient advance warning for the launching of the GARLIC SALT aircraft.

The BELMONT's accomplishments [] were numerous. Through collection and analysis, the ship forwarded over 1200 items of pertinent traffic during the period 06 June to 03 July 1966. Seven new [] entities were detected, developed and notated. Under this category also, the BELMONT made the initial intercept and identification of closed circuit TV, facsimile, data transmissions and unique VHF/UHF transmissions.

Under the category of processing and reporting, approximately 250 field reports/translations were forwarded to DIRNSA. Among the reports were highly perishable COMINT items which entailed improvised processing measures to exploit distorted speech privacy radiotelephone intercepts. The ship returned to Norfolk in mid-July 1966.

FOURTH DEPLOYMENT

In September 1966, the BELMONT began a deployment to the west coast of South America which extended to a point several hundred miles south of Valpariso, Chile. General mission tasking included: illicit communications including dissident, guerrilla and agent activities; development of

[]
for and development of Latin American COMINT, para-military, and other governmental communications with emphasis on new activity and cases assigned TEMPO notations; search for and development of ILC communications, emphasizing ship/shore activity involving Latin American ports.

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PL 86-36/50 USC 3605

FIFTH DEPLOYMENT

On 01 February, the BELMONT began the first circumnavigation of South America by a U.S. SIGINT platform. Collection emphasis for this deployment was on internal governmental, security forces, dissident, anti-dissident, military, para-military, police, ILC, [REDACTED] weapons associated and illicit communications. In addition, the BELMONT was tasked with covering the [REDACTED]

[REDACTED]
[REDACTED] Coverage by USN-854 was necessary to satisfy national level requirements and provide support to those personnel responsible for the safety of the U.S. delegation.

In the interest of timeliness, USN-854 was delegated end-product reporting responsibility beginning [REDACTED] continuing through the conference period. USN-854 was authorized to release translations and reports on significant items [REDACTED] intercepted by the BELMONT [REDACTED]

Upon arrival in the conference area, the BELMONT encountered heavy shipping traffic. Because close-in operations were necessary DIRNSA had two alternatives; to have the ship anchor outside shipping lanes or, no more than five NM off the coast during periods of reduced visibility; or to anchor in the vicinity of a U.S. destroyer already in the harbor. DIRNSA offered no objection to the ship moving within approved tracks providing the cover for the operation was not jeopardized.

SIXTH DEPLOYMENT

On 23 May 1967, G Group requested K initiate action to deploy the BELMONT to the African area upon conclusion of the ship's scheduled yard period. The projected deployment (15 August - 05 December 1967) was to emphasize cover along east coast Africa with west coast Africa cover limited to the area south of Luanda, Angola. Prior to definitive action being taken on this proposal, events in the Middle East caused a change in plans.

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The loss of the USS LIBERTY (USN-855) as a direct result of Israeli action during the brief Arab-Israeli war created a void in U.S. SIGINT cover in the eastern Mediterranean. DIRNSA, in an 8 June message to JCS, requested consideration be given to a proposal to deploy the BELMONT to the east Mediterranean to replace the LIBERTY and supplement fixed site coverage in the area. The subsequent imposition of a 100 NM CPA in the eastern Mediterranean for all U.S. SIGINT reconnaissance platforms caused DIRNSA to withdraw its proposal.

In July 1967, DIRNSA recommended deployment of the BELMONT to the west coast of Africa August to November 1967. The proposal was accepted by JCS and the ship sailed on 15 August for African waters.

In October, an impending Soviet space shot resulted in the diversion of the ship to the east coast of Africa in order that it be more readily available for Indian Ocean operations if the need for a platform arose. Special tasking for the operation was forwarded to USN-854 on 05 October. These special operations were completed on 10 November and the ship departed Mombasa 15 November for Norfolk and a yard overhaul.

SEVENTH DEPLOYMENT

The BELMONT did not depart for Africa again until mid-1968 due to numerous delays encountered during the ship's yard overhaul period and the need for refresher training for the SECGRU personnel on board. The BELMONT's operations orders were changed several times enroute to West coast Africa to reflect extended CPA's e.g., the Nigeria CPA was increased to 100 NM due to the civil war in that nation. This CPA change led to a revision of the ship's mission objectives. The objectives for the Cameroons were affected by the 100 NM CPA off Nigeria and operations in this area were curtailed to 3 days. The curtailment of Cameroon tasking resulted in elevating Congo (B) tasking to second priority. Basic objectives in Gabon were unchanged.

In July 1968, DIRNSA provided CINCLANT with mission objectives for the BELMONT operations. These objectives (listed below) were in satisfaction of consumer requirements:

- a. To assist in developing a SIGINT data base for Chad, CAF, both Congos, Dahomey, Ghana, Guinea, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, Upper Volta.

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b. To collect in depth communications of Gabon and Cameroon for technical development and to perform detailed analysis of these communications.

c. To collect information about the above listed countries on the following:

- (1) Military/Paramilitary forces.
- (2) Communist activity.
- (3) Anti-U.S./Western activity.
- (4) Security/Counter Intelligence activity.
- (5) Subversive/dissident activity.
- (6) Developments affecting internal government stability.
- (7) The movement of arms/military equipment into/within African nations.
- (8) Evidence and location of illicit communications within African nations.
- (9) Information on the strength, plans, organization, orientation and activities of dissident elements and evidence of foreign support and control.
- (10) Activities of those forces used in suppressing internal disorders and in border clashes.

d. With reference to Portuguese Africa, objectives were to determine:

- (1) The political and military activities of nationalist organizations attempting to subvert Portuguese Guinea, Angola and Mozambique.
- (2) Foreign support of such organizations, particularly from Tanzania, Congo (Kinshasa), Zambia, Communist China and Cuba.
- (3) Portuguese military activities and casualties in overseas provinces.

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(4) Portuguese collaboration with security forces of South Africa and Rhodesia.

In early September, the BELMONT was deployed to East coast Africa and continued to operate along that coast until the end of October 1968. While the ship was off the coast of Mozambique, it was able to successfully copy signals from two Soviet space vehicles (Soyuz II & III) that had been recently launched.

On 2 November the ship departed Lourenco Marques enroute Norfolk. A port call was made in Recife, Brazil and operations were conducted off the coast of French Guinea, Surinam and Guyana prior to the ship's arrival in Norfolk on 27 November 1968. Enroute to Recife, the BELMONT was advised of and subsequently intercepted telemetry from a Soviet space vehicle launched toward the moon (ZOND 6). While in port Recife, the BELMONT, in response to tasking against Brazilian multichannel activity in the 270-330 MHz range, intercepted 6 different frequencies and forwarded 74 wideband tapes to NSA.

From 20-23 November, the BELMONT intercepted Guyana FDM systems for the first time. A total of 8 frequencies were recovered and 14 intercepts made.

While the BELMONT was conducting its cruise, COM-NAVSECGRU noted in a 10 August message to DIRNSA, the unproductiveness of certain of the BELMONT's collection facilities used against West African targets, e.g., NMSDB .08%, ELINT .02%, R/T 5-10% for the period 2 July to 6 August 1968. Concern was expressed over the prolonged use of a well equipped platform against low-opportunity targets at ranges which preclude intercept of most VHF/UHF/SHF signals. Only high priority manual morse and printer targets would justify maintaining the BELMONT in so unproductive and area.

DIRNSA replied that the BELMONT's primary mission was to assist in the development and maintenance of a SIGINT technical base for the HF communications of 18 Sub-Saharan countries. During the period reported by COMNAVSECGRU, the BELMONT provided excellent cover on the HF communications of Gabon, both Congos, Cameroon, Ivory Coast, Ghana, Upper Volta and Niger, with 85% of its intercept being unique. With reference to NMSDB, the countries involved have a limited signal environment above 30 MHz, and CPA limitations further hampered NMSD operations.

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The lack of ELINT targets confirmed the DIA World-Wide EOB. Finally, DIRNSA noted, mission objectives cannot be measured by volume and types of intercept alone. The proposed September diversion of the BELMONT to the East coast of Africa was necessitated by Indian Ocean requirements and not the productivity of the ship.

EIGHTH DEPLOYMENT

In mid-February 1969, DIRNSA recommended to CINCLANT, that the USS BELMONT be deployed to the Mediterranean to collect Soviet Mediterranean Fleet, North African, and Middle Eastern communications. SIGINT mission objectives for the BELMONT's operations were formulated and forwarded to CINCLANT/CINUSNAVEUR on 11 March. The stated mission was:

1. To conduct SIGINT intercept operations in the Mediterranean and littoral waters in satisfaction of customer requirements, through the collection, processing, and reporting of Soviet Mediterranean fleet-associated communications activities.
2. To provide SIGINT evidence of Soviet expansion of surface forces and facilities in the Mediterranean area.
3. Identify and catalog all new and unusual communications and signal characteristics encountered.
4. Determine the electronic/intelligence content of low-powered and line-of-sight emitters (including ELINT) serving tactical forces of various naval, ground and air defense forces of North Africa and Middle East countries.

Seaborne objectives were:

1. To develop VHF voice tactical communications between surface units and air/surface units for intelligence, including testing of weapons/training tactics.
2. To provide SIGINT indicators of the expansion of Soviet surface forces/facilities in the Mediterranean.
3. To monitor the 150-300 Mhz range for communications relating to Soviet naval testing and operational use of communications systems.

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4. To collect the Soviet [redacted] system
[redacted] to assist in
designing/developing effective countermeasures.

5. To detect (particularly during naval/naval air operations) all Soviet Mediterranean fleet ELINT signals and to correlate to platform, to include visual/photo confirmation.

6. To identify electronic equipment and tactics employed by Soviet aircraft in Mediterranean operations.

7. To collate information on tactics and methods used during Communist jamming activity (both air and shipborne).

8. To research communications serving naval coastal observation posts, coast artillery units, air surveillance radar stations, air defense artillery units, MTB/KOMAR squadrons, to determine defensive reaction/disposition.

9. To procure tip-off relating to pre-launch, post-launch of Soviet aircraft operating from Cairo West/Matruh airfields for reconnaissance of the U.S. Sixth Fleet.

10. To determine tactics employed by Arab based Soviet aircrews for flights against land targets.

11. To disclose Soviet indications/intentions for changes in flight operations.

[redacted]

The mission was subsequently approved and the ship departed Norfolk enroute the Mediterranean on 18 June 1969. Since the ship was to operate in the same area as the PALM BEACH, CINCLANT requested that COMSIXTHFLT assumed direct operational control of both ships. Hopefully, this would preclude duplication of operations area, mutual interference and conflicting tasking.

During the course of the BELMONT's Mediterranean operations, the ship covered Soviet fleet activity with primary emphasis on the Soviet Helicopter carrier MOSKVA.

While in the Mediterranean, the BELMONT conducted five separate patrols. Extracts from the summaries of these

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patrols indicate that the initial patrol consisted of three days of coastal surveillance operations along the north coast of Africa while the ship was enroute to Naples, Italy.

Patrol two began when the ship departed Naples on 09 July enroute to Kithira Anchorage via the Straits of Messina. Surveillance operations were maintained a 50 NM radius of the anchorage. This patrol was completed on 02 August as the BELMONT arrived in Athens, Greece.

Departing Athens on 11 August, the BELMONT began patrol three, again in the area of the Kithira Anchorage. The MOSKVA was intercepted by the BELMONT when it arrived in the area of Crete on 20 August. Close surveillance was maintained by the BELMONT until 28 August when a port visit was made to Valleta, Malta.

Patrol four began as the BELMONT departed Malta on 31 August and again intercepted the MOSKVA in the Eastern Mediterranean on 02 September. Several times during this surveillance period, the MOSKVA entered the Gulf of Sollum while the BELMONT was required to maintain a CPA of 50 NM from the coast. On 11 September, the MOSKVA departed the Gulf enroute to the Dardanelles and its home port in the Black Sea. On 13 September, the BELMONT broke off surveillance of the MOSKVA and between 14-22 September conducted surveillance of targets of opportunity in the vicinity of Kithira Anchorage. Patrol four terminated on 26 September when the BELMONT arrived in Rhodes, Greece.

On 07 October, the BELMONT departed Rhodes on Patrol five. The ship operated near the Kithira Anchorage until 20 October when its mission was terminated by CNO. SECDEF had approved the retirement of the BELMONT with the other TRSS and CINCUSVAVEUR was directed to return the ship to its home port as soon as it was feasible.

After a brief port call in Rota, Spain the ship departed the Mediterranean enroute Norfolk. On 31 October, the BELMONT arrived in Norfolk where stripping and deactivation procedures began. Deactivation was completed in January 1970.

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PL 86-36/50 USC 3605
NSA 3.3b(3)

USS LIBERTY (USN-855)

On 5 February 1965, the USS LIBERTY, AGTR-5, sailed from the Bremerton shipyard at Washington. The ship transited to Norfolk, Virginia and arrived 25 February to begin preparing for her first deployment as a sea-borne SIGINT collection vessel.

The USS LIBERTY with USN-855 embarked, conducted shakedown operations at Guantanamo Bay between 29 March and 27 April 1965, and then deployed to the west coast of Africa from Norfolk on 15 June 1965.

FIRST AFRICAN MISSION

The primary mission of USN-855 was the collection of [redacted] Portuguese African communications with emphasis on Portuguese Guinea and Angola. In addition, USN-855 became the first seaborne unit of this kind to be authorized reporting responsibility on African countries.

After a port call in Santa Cruz, Canary Islands, the ship arrived in port Abidjan, Ivory Coast on 15 July. The ship then conducted coastal operations between Abidjan and Capetown, South Africa until 4 October (the LIBERTY was diverted from Lagos, Nigeria to attempt coverage of ESV re-entry communications 10-14 September) and arrived in Norfolk on 23 October 1965.

This first deployment was considered highly successful in all aspects. Traffic analysis and reconstruction of West African communications were performed in detail and excellent working aids were prepared on Portuguese Guinea and South African systems.

USN-855 provided the first intercept of Senegalese naval and police (VHF) and Gabonese military communications. The deployment, timed to coincide with a [redacted] change on the Portuguese military targets in Angola, resulted in successful coverage of the change [redacted]

[redacted] Also, coverage of callsign/address group change in Portuguese military communications of Portuguese Guinea allowed USN-855 to reconstruct the military organization and communications structures down to the lowest level.

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SECOND DEPLOYMENT TO WEST COAST AFRICA

On 3 January 1966, the USS LIBERTY deployed from Norfolk enroute Abidjan, Ivory Coast to begin the second of a series of collection operations off west coast Africa.

The ship operated between the Ivory Coast and Angola for approximately 2 months before returning to Norfolk on 21 March 1966.

The mission was twofold: primarily, to confirm known and develop new target communications; and to produce current intelligence on [redacted] Portuguese language entities.

Significant contributions of USN-855 during this deployment were: coverage and identification of 150 new communications entities; development of low level Cameroon communications; first intercept and identification of Togo and Chad military nets; reconstruction of Portuguese Angolan military communications; new civil communications groups identified in Mali, Guinea and Congo (K); and [redacted] systems in use by the military in Portuguese Guinea which represented the only current readable system used on communications in Portuguese Guinea.

SUBSEQUENT DEPLOYMENTS TO WEST COAST AFRICA

On 31 May 1966, the USS LIBERTY sailed from Norfolk to begin her third deployment to the west coast of Africa. This mission, which lasted until 30 August 1966, was conducted between Senegal and Angola:

USN-855 was tasked with collection of the following: [redacted] Polish and East German shipping; ILC; internal Sub-Saharan African communications including military, para-military, police, naval, civil, air internal government, etc; and [redacted] Portuguese African communications.

In June, the LIBERTY intercepted communications which contained French and Russian language messages concerning the arrival and departure of aircraft. These messages related to the training of Senegalese pilots by Russian instructors.

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One additional west African collection mission was conducted during the period 01 November 1966 - 28 February 1967. The tasking and operations area was the same essentially as in previous missions.

In January 1967, the USS LIBERTY provided intercept which permitted NSA to notate the first communications group of Botswana. Of particular interest was the intercept of the Congolese civil multiplex link between Kinshasa and Bukavu. Although both terminals were copied, the Bukavu terminal was especially important since this was the first continued intercept of that terminal.

The LIBERTY returned to Norfolk on 28 February 1967 for upkeep.

FINAL DEPLOYMENT

On 3 May 1967, the LIBERTY sailed from Norfolk to the west coast of Africa.

On 23 May, NSA requested JCS authorize the diversion of the USS LIBERTY from Abidjan to an operational area off Port Said to provide vital SIGINT coverage in the Mid-East crisis area. The diversion was approved and on 01 June the ship sailed for Rota, Spain where linguists and technical support were embarked.

On 2 June, the LIBERTY departed Rota for her operation area off Egypt. On 7 June her operation area was moved westward to maintain coverage of the UAR target entities (about 68 NM northeast of Port Said.) The same day, JCS initiated a message increasing the CPA to the UAR from 20 NM to 100 NM due to the allegations by the Arabs that the U.S. had participated in Israeli air strikes. As was later proven, the LIBERTY did not receive the order to move.

On 8 June, the ship was attacked by Israeli torpedo boats and fighter jets. Serious damage was sustained by the ship and casualties were high. The ship was subsequently towed to Malta to undergo temporary repairs and later to the U.S. where she remained out of commission until the end of the shipborne collection program. (SEE "Report to the Director NSA - USS LIBERTY (USN-855) 23 May - 8 June 1967)."

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USNS VALDEZ (USN-851)

In response to growing concern about the African continent in early 1961 by the State Department, DOD, and CIA, NSA drafted plans for, and requested that, DOD approve a seaborne intercept platform that could provide the U.S. with a collection capability in this area.

It was recommended that the ship be provided by MSTC and the SIGINT spaces be manned by NSG personnel. The request was approved in OSD memorandum for DIRNSA on 12 July 1961. A crash program for conversion (Project HOBBYHORSE) was begun and the VALDEZ became operational on 15 November 1961 at a cost of 3.3 million dollars.

INITIAL ASSIGNMENT

The USNS VALDEZ's initial primary mission was: "To develop and exploit internal communications of Sub-Saharan Africa", and secondary mission: "To supplement the monitoring of Soviet ESV activity in the South Atlantic as may be practicable."

The VALDEZ's first deployment to Africa was interrupted before it began. The presence of Soviet Space Event Support Ships (SSESS) in the Gulf of Guinea area for the Soviet Mars probes of October 1960 and ESV shots in December, plus the activity of similar ships in the Mid-Pacific in 1961, generated data collection requirements for NSA. It became necessary to provide a continuous capability to monitor Soviet ESV/space/SSESS activity and the USNS VALDEZ was chosen to provide this coverage off the west coast of Africa until she could be relieved. Approximately two months were spent on this secondary mission before the ship was replaced on 28 January 1962.

During these two months, no events occurred. However, during the period 7-12 December (a probable unsuccessful attempt to launch an ESV occurred on 11 December) the USNS VALDEZ collected [REDACTED]

The ship then operated successively off the west coast of Africa between February 1962 and August 1964 in the corresponding phases (see pages 68-70).

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EXTENSION OF THE USNS VALDEZ

The USNS VALDEZ was originally slated to be phased out in 1964. As the time for inactivation approached, and prospect of losing the ship became more apparent, strong voices were heard in favor of extending the ship. The basic rationale for the proposal was as follows: TRSS 2 and 3 which were programmed for commissioning by the end of calendar year 1963 would not become operationally available until late FY64. At that time, the VALDEZ, MULLER and ROBINSON were due for deactivation; this left only 3 TRSSs to be applied to all existing requirements. TRSS 4 and 5, programmed for December 1964 would not be operationally available until mid-1965, besides, it was believed that a major change was taking place in the African cover requirements and that a ship was needed on each coast simultaneously to cover periodic Soviet space shots which NSA was committed to cover. If the ship was extended after 1 May 1964, it could produce a much more satisfactory coverage situation during the next two years.

In November 1963, ADN, in a memorandum to the Director, suggested that NSA continue to pay for and operate the VALDEZ at least until the Navy had 5 AGTRs operational.

On February 16, 1963, DIRNSA decided to program for the extension of the VALDEZ. This required reprogramming action since the money for the ship's operations in 1965 had been reallocated for other uses.

The ship's first deployment off the east coast of Africa (February 1964 - February 1965), was for the purpose of conducting a directed search of the communications environment of Angola and Mozambique, to re-establish known internal [] networks and to isolate and identify new target entities using known systems. Further, to assist in the compilation/maintenance of a SIGINT data base for the following countries: Republic of South Africa, Malagasy Republic, Botswana, Lethoso, Swaziland, Tanzania, Kenya, Uganda, and Somali Republic, collecting information relative to the military/paramilitary forces, communist/ultra-leftist activity, anti-U.S. and anti-Western activity, security/counter-intelligence activity, subversive and dissident activity, and any development affecting internal government stability, including coup attempts and changes in key government personnel.

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PHASE DEFINITIONS

Phases of operation were established to divide Sub-Saharan Africa targets into geographic/political groups, and to simplify and clarify tasking. Although specific geographic points have been designated as the beginning and end of each phase, practical considerations require that during phase transitions, the intercept platform blend category alpha assignments of the two phases and employ category Charlie positions against the most hearable/productive targets.

Additional phases were established for one-time variations in tasking and were designated as sub-phases of the existing phases (e.g. Phase one alpha).

Permanent Phases:

PHASE ONE - Between Norfolk, Va. and Sub-Saharan Africa

PHASE TWO - Coastal between the Canary Islands and Dakar, Senegal

PHASE THREE - Coastal between Dakar and Cape Palmas, Liberia

PHASE FOUR - Coastal between Cape Palmas and Porto Novo, Dahomey

PHASE FIVE - Coastal between Porto Novo and 02 degrees North

PHASE SIX - Coastal between 02 degrees North and the Congo River

PHASE SEVEN - Coastal between the Congo River and 17 degrees South

PHASE EIGHT - Coastal between 17 degrees south and 20 degrees East

PHASE NINE - Coastal between 20 degrees East and Lourenco Marques

PHASE TEN - Coastal between Lourenco Marques and 11 degrees South

PHASE ELEVEN - Coastal between 11 degrees South and the equator

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PHASE TWELVE - Coastal between the equator and 10 degrees North

PHASE THIRTEEN - Coastal between 10 degrees North and Massawa, Ethiopia

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After annual overhaul in Capetown, South Africa (24 January - 26 February 1964) the ship deployed to both coasts operating as far north as Dakar, Senegal on the west and Mombasa, Kenya on the east (February 1964 - February 1965).

By this time, the primary mission of the VALDEZ had become one of maintaining the data base compiled during her previous cruises. Evaluation of this east coast deployment indicated that during this period, traffic volume was high and quality of intercept was good. The contribution of the VALDEZ was excellent particularly on indications of South Africa/Rhodesian relations; background on South African internal/defense affairs; intelligence on the military and police forces of Southern Somalia (difficult to obtain from other sources); first intercept of PO civil authorities communications in Mozambique; first adequate coverage of voice nets which facilitated analysis and compromise of new military routing indicators; and successful telemetry intercepts on 8 Soviet ESV events.

On 25 October 1965, the ship was diverted to the west coast of Africa where she operated until 15 December 1965. USN-851 was the sole source of intercept of South African communications during the latter half of 1965. From this intercept intelligence was obtained on South Africa's posture following the unilateral declaration of independence by Rhodesia, internal guerrilla operations and the first COMINT evidence of air activity in the Caprivi Strip.

Congo (L) communications contained valuable intelligence on the coup d'etat which occurred 24-25 November 1965.

From 27 December 1965 until 24 May 1966, the VALDEZ operated off the east coast of Africa between Capetown, South Africa and Somalia. The ship then returned to Capetown for overhaul 24 May - 19 June 1966. During this east African cruise, USN-851 continued to be a primary source of intercept from much of the African continent.

Significant contributions were as follows: USN-851 confirmed intercept of the first radioprinter activity noted in Ethiopian military communications. Intercept of Somali internal targets provided very useful intelligence on military and police forces and possible Russian communications in Somalia evidenced by intercept of a

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[REDACTED] USN-851's excellent coverage of South African targets aided TEXTA continuity, expanded the airfield location indicator listing, provided OB data and detected a probable radar calibration exercise by an unidentified South African ship and Dakota transport-type aircraft.

Upon completion of overhaul 24 May 1966, the USNS VALDEZ returned to the east coast where she continued operations until 10 October 1966. The ship operated from Capetown as far as Aden.

On 20 October, the ship deployed to the west coast from Capetown, South Africa and operated between Lunada, Angola, and Durban, South Africa until February 1966. The ship then covered the east coast until 24 May 1966 when she arrived in Capetown for overhaul.

On 20 June 1966, The USNS VALDEZ completed overhaul and deployed to the east coast where she operated until 19 October 1966. On 20 October the ship shifted to the west coast to operate between Walvis Bay and Luanda, Angola until December 1966.

The VALDEZ deployed once again to east coast on 3 January 1967 and remained there until 8 April when she began her transit through the Suez Canal to the Mediterranean enroute CONUS.

VALDEZ REHABILITATION PLANNING

The VALDEZ, commissioned in 1967 to meet temporary collection requirements in Sub-Saharan Africa, had been programmed since 1964 on a year-to-year basis until 1967. She had been operated exclusively from foreign ports since 1961 and because overhaul had routinely been accomplished in Capetown, she had been virtually inaccessible for modification and updating of the research department facilities and electronic installations. In 1967, the ship was programmed for overhaul prior to July 1967.

Discussions between NSA and USN-851 personnel took place aboard the USNS VALDEZ in Mombasa, Kenya (23 February - 2 March 1967). The purpose of the meeting was to determine forthcoming overhaul requirements for the USNS VALDEZ, and to determine feasibility of reconfiguring the MILDEPT living and operational spaces. Specific areas of concern were identified including the following:

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Some SIGINT positions were not configured IAW
OPINS 20/T-1037.

The ship needed updated transmitter/antenna
installations.

The enlisted men's berthing was crowded and did
not conform to minimum Navy habitability standards as
prescribed by OPNAV Instructions 9330.5A.

There were no qualified operators/maintenance
personnel to operate the WLR-1.

The existing layout of the operations spaces was
poor.

In March 1967, in a message to COMSTS, DIRNSA proposed
the USNS VALDEZ be returned to CONUS for its annual over-
haul in order to accomplish the numerous modifications.
Subsequent discussions resulted in agreement on the pro-
posal and in June \$135K of FY67 funds was forwarded to
COMSTS to cover the costs of overhaul and rehabilitation.

MEDITERRANEAN OPERATIONS

In response to a request from G Group, DIRNSA proposed
a schedule to CINCLANT that would sail the USNS VALDEZ
through the Mediterranean on her return to the U.S. for
overhaul and rehabilitation. The purpose of the Mediter-
ranean mission was to develop a broader technical base
against UHF/VHF targets in the Middle East and North
Africa and to exploit communications associated with

Due to the large amount of VHF R/T tasking to be levied
it was necessary to install 3 additional VHF R/T positions
on the VALDEZ. The installation was accomplished in
Massawa, Ethiopia just prior to the ship's departure for
the Mediterranean. Additional personnel, also required
to man the positions, were provided by NAVSECGRU.

The cruise was divided into 5 phases; each phase was
treated as a separate intercept operation. The phases
were broken down as follows:

Phase one: Between Latakia and Port Said

Phase two: Between Port Said and Latakia and
return

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Phase Three: Between Port Said and a point North of Galite Island

Phase four: Between Galite Island and Bougie area

Phase five: Bougie area to Oran

On 21 April, after a delay in Port Said for repairs, the ship commenced her Mediterranean operations. The ship was targeted primarily against UAR, [redacted] illicit, [redacted]

On 23 May, approximately one month later, the USNS VALDEZ concluded her operations and departed the Mediterranean enroute New York. The ship arrived in New York on 13 June 1967.

Significant contributions provided by USN-851, during Mediterranean operations, were as follows: Voice representing initial intercept of [redacted] communications was obtained; an extremely high level of UAR VHF intercept was obtained containing items considered significant due to the uniqueness of activity or frequency, e.g., the first VHF intercept in the Yemen since 1964, first HF voice communications heard from a new UAR radar site in the Yemen, and utilization of a unique VHF frequency by UAR naval entities; intercept of HF voice ship/shore communications in the Gulf of Aqaba was the first known intercept of [redacted] from this area; in [redacted]

[redacted] intercept also confirmed the location of a radar installation in the vicinity of Al-Basit, Syria, reported previously only in collateral references.

USNS VALDEZ REHABILITATION

Between 14 June - 11 September 1967, the USNS VALDEZ underwent rehabilitation, upkeep and refresher training. Included in the yard projects were: rehabilitation of enlisted men's living spaces including air-conditioning;

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installation of half deck in #2 hold above existing third deck MILDEPT office spaces; air-conditioning of MILDEPT maintenance area and administration spaces; and painting of the exterior of the ship.

REDEPLOYMENT TO AFRICA

The USNS VALDEZ departed for the west coast of Africa on 18 September after test and training exercises. From 7 October - 1 December 1967, the ship operated off the west coast of Africa between Monrovia, Liberia and Luanda, Angola. The ship was targeted against Polish/East German/Cuban shipping, Dahomey, Nigeria, French Sub-Saharan, Guinea, Ghana, Gambia, Ivory Coast, Liberia, Mali, Mauritania, Niger, Portuguese Guinea, Senegal, Sierra Leone, Togo, Upper Volta, ILC and NMSD communications.

On 1 December 1967, the ship shifted to operations off the east coast and remained until May 17 when she once again moved to the west coast. While on the east coast, the ship was targeted primarily against South Africa, Tanzania, Zambia, Kenya, Mozambique [redacted] communications. In addition, USN-851 was charged with collection of communications from CHICOM merchant ships operating in the Indian Ocean.

In May 1968, the ship returned to the west coast where she operated until 18 December 1968 when she set sail for New York for overhaul.

In March 1968, NAVSECGRU and DIRNSA concluded that the ship should be returned to CONUS for her next overhaul. Closure of South African ports to American vessels (see Section V) had effectively eliminated the only ports capable of handling major repairs and outfitting. The ship was returned in September to accomplish the reinstallation of the communications suit IAW red/black criteria and installation of crypto gear, installation of AN/SRC-33 TRSSCOMM communications facility, reballast of the ship and mechanical overhaul.

USNS VALDEZ OVERHAUL 1968-1969

In August 1968, JCS reiterated the high priority of intelligence associated with the Soviet effort to launch a circumlunar vehicle which they planned to recover or commence recovery in the Indian Ocean, and recommended a TRS be used in support of these [redacted] operations off east coast Africa (Ref section 5, p. 121).

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The USNS VALDEZ, then commencing overhaul in the U.S., was examined as to its capability to provide this support.

The system capability of USN-851 was not adequate to conduct collection against the Soviet missile problem. A study was conducted by NSA/NSG to determine the minimum acceptable system that would be necessary to provide this support.

In October 1968, the minimum system capability was established which included antennas, receivers, recorder/reproducer, timing system, and auxiliary equipment and a phased course of action to provide this capability in the shortest time possible was provided by NAVSHIPS. In order to maintain the VALDEZ's departure date, it would have been necessary to accomplish some installation while the ship was underway and while in port in Africa.

An on-going study of the system installation was finally concluded in January 1969 when DIRNSA, after extensive re-examination of the proposal to employ the VALDEZ as an Indian Ocean telemetry collection platform determined it was not feasible. Speed limitation would prohibit the rapid deployment to the desired target area in the Indian Ocean and would restrict the normal east African coastal operations during pre-space vehicle launch/recovery periods if the ship had to remain within realistic distances of the optimum Indian Ocean collection positions. The requirement for finding and installing a telemetry package was rescinded.

During the ship's overhaul period, a TRSSCOMM AN/SRC-33 system was installed. It was hoped that this additional equipment would provide the ship with a more reliable communications capability. The USNS VALDEZ, in the past, had experienced chronic communications problems especially while operating in the Gulf of Guinea.

From the time installation of the system was completed, problems with the equipment began primarily involving the antenna and its controls. The ship, originally scheduled to depart for Africa on 11 December 1968 postponed sailing until January 23, 1969, due to recurring problems involving the installation and testing of the new TRSSCOMM.

During its remaining days in the U.S., the ship received scuttle/destroy devices and conducted walk through drills.

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The VALDEZ finally departed for east coast Africa on 23 January 1969. At the same time, a high priority requirement arose for collection against Guyana for at least 3 days. The ship sailed to the Caribbean, stopped in Roosevelt Roads, Puerto Rico to debark technical representatives and continued on to operate off Guyana, Surinam, French Guiana and Brazil. After a 4 day port call in Recife, Brazil, the ship sailed for Africa.

REDEPLOYMENT TO WEST COAST AFRICA

During the USNS VALDEZ's port call in Recife, G Group requested the ship be transferred to operate off the west coast of Africa instead of the east coast. The fact that the requirement for the VALDEZ to satisfy telemetry collection requirements off east coast Africa had been dropped and that there had been no comprehensive coverage of west coast Africa for an extended period of time was the rationale behind the change. The proposal was forwarded to JCS, and subsequently approved. The ship then sailed to Monrovia, Liberia to commence operations which would continue until 27 August 1969.

Because of the 100 NM CPA to Nigeria the operating area for the ship was north and south of the restricted area. The primary operating area was between the Congo River and 10 degrees South.

USN-851 was directed primarily at the development of Portuguese/Angolan internal communication of the following types: state security, guerrilla, military and joint armed forces.

As an integral part of these SIGINT operations off the coast of Angola, USN-851 translated Portuguese/Angolan plaintext and low level cipher. Portuguese collection included SIGINT information on the following: Portuguese military, paramilitary, political and economic activity; insurgent, subversive and counter-subversive activity; non-routine activity, alerts, operations or operational plans; any mention of acquisition of or training in the use of new types of military equipment; activity reflecting the deployment of military or paramilitary forces; activity which indicated Portuguese military, political or economic relations with other African countries; activities of Tanzania, Congo (K), Zambia, Communist China or Cuba in supporting Nationalist organizations seeking to subvert Portuguese governmental rule.

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The USNS VALDEZ was tasked secondly with the collection

[redacted] of the Angolan VHF frequency division multiplex system for collection while in port Luanda.

In April, the ship experienced failure of transmitters which required 26 days in port Monrovia, Liberia to correct. At the same time, TRSSCOMM system developed problems. Correction of these problems was hampered by excessive heat in the equipment bays. It was necessary to send a technician and parts from the U.S. to Monrovia to accomplish repairs.

On 6 June, the ship suffered a main engine disablement which left it dead in the water off Luanda. The ship was towed to port where repairs were completed on 14 June.

On 13 August, CNO withheld the obligational authority to cover the operations of VALDEZ and MULLER beyond 1 October 1969 (ref Section 6). COMNAVSECGRU recommended the immediate return of the VALDEZ to the U.S. and CINCLANT, on COMSTS' estimate that 60 days would be necessary to deactivate the ship, ordered her return on 23 August.

The USNS VALDEZ, in port Monrovia for routine port call, received orders to sail to Norfolk, Va. on completion of the in port period. The ship departed on 27 August and arrived in Norfolk on 18 September to commence deactivation.

Specific contributions of the USNS VALDEZ during this last deployment were as follows: USN-851 intercepted Portuguese authorities in Luanda requesting further interrogation of persons entering Angola from Zambia in order to determine the rebel organization, location of their bases and extent to which the Zambian government supports rebel activity in Angola; intercept revealed the [redacted]

[redacted] requesting [redacted] to train and equip his men for future guerrilla action in Zambia; the Chief also queried the possibility of support for such action by South Africa, Rhodesia and Malawi; intercept from USN-851 during April revealed four new military cipher systems and a new security forces cipher system, intercept from USN-851 in June provided information indicating a change of the structure of address groups used by the Portuguese military organization in Angola, the hijacking of a Portuguese airplane to Congo (B) and the action taken for its return, the sabotage of the Benguela Railroad in Angola and, the location of UPA, MPLA and UNITA camps in Angola and Congo (K).

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USNS MULLER (USN-856)

In early 1962, the Secretary of Defense directed NSA to establish a SIGINT collection capability in the vicinity of Havana, Cuba. In response to the DOD directive, and to determine the resources this would require, DIRNSA developed a two-phased program for submission to the Assistant Secretary of Defense and arranged for the charter and conversion of a ship through the Military Sea Transportation Service (MSTS).

In August 1962, COMSTS advised that the USNS MULLER had been selected for reoutfitting and by September, alteration procedures had begun.

On 23 April 1963, the USNS MULLER T-AG-169 left Higgins Shipyard near New Orleans for Key West and on 30 April the ship, [redacted]

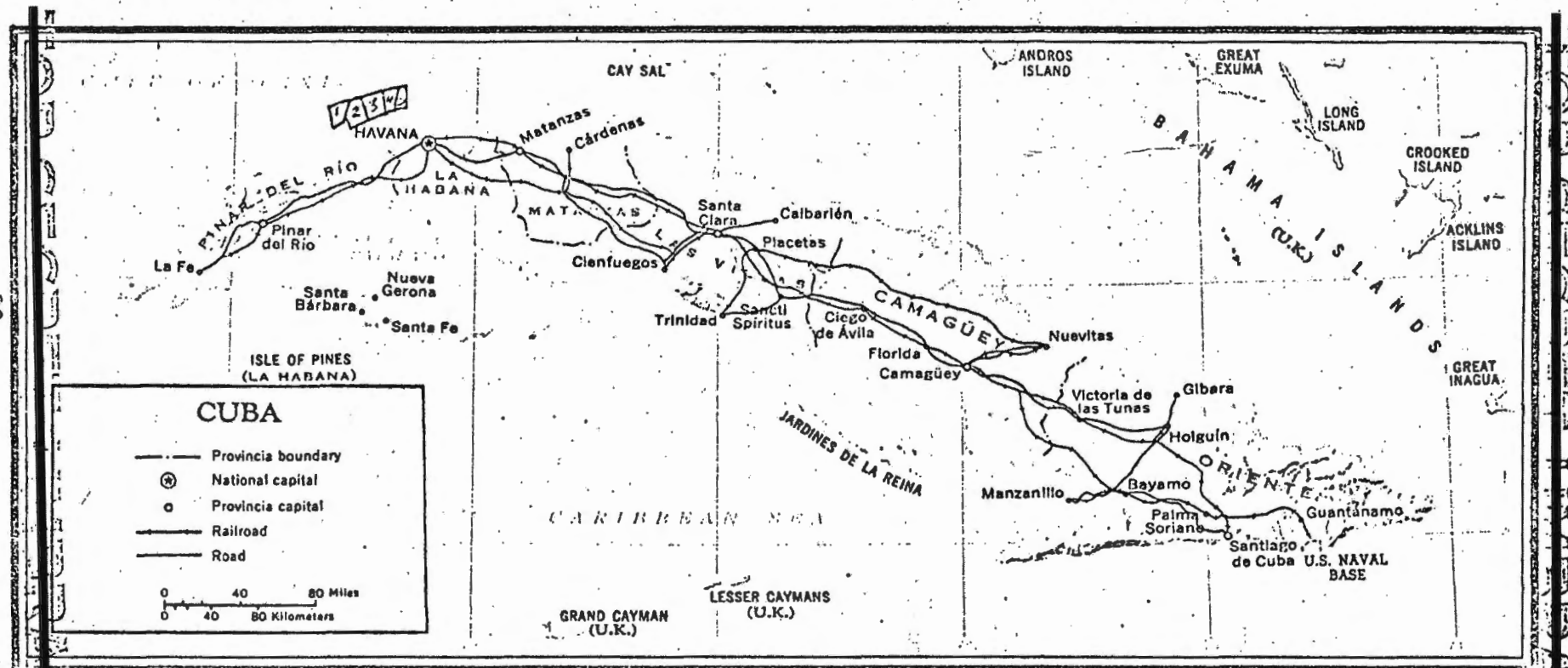
[redacted] began operations off Havana with USN-856 embarked.

The USNS MULLER operated solely off the Cuban coast from April 1963 until October 1969. Her deployments normally lasted 10-11 months with an annual one month overhaul during the summer months when she was relieved by the USS GEORGETOWN (USN-852). Her home port was Port Everglades, Florida and it was here she returned for five days after every twenty-five days at sea Sec. 5, p. 103). The ship operated in an area sub-divided into 5 blocks, six to ten miles off the coast of Havana (see pages 80-81).

The mission of the USNS MULLER as it evolved over her six years of operations was as follows: collection of HF/VHF communications and communications systems in the Havana area which have inherent line-of-sight range limitations and participation in the Cinclant Advisory Warning Plan for Airborne reconnaissance flights. The majority of the Cuban tasking assigned to USN-856 was the collection of the [redacted]

[redacted] and associated VHF feeders. Primary emphasis is placed on the collection of military, military air force, economic, state security, civil air, air defense, clandestine, joint air force, naval shipping [redacted] civil communications. USN-856's tasking also included targetting against Cuba's ELINT emitters associated with early warning, height finder, fire control, surface search, missile control, IFF, data transmissions, direction finding and air traffic control.

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USNS MULLER OPERATION AREA COORDINATES

NORTHERN COORDINATES

231930N 830230W

232240N 825450W

232552N 824450W

232853N 823415W

233154N 822340W

233500N 821320W

SOUTHERN COORDINATES

239645N 830030W

230945N 825008W

231045N 824915W

231047N 823900W

231350N 822855W

231657N 821828W

232005N 820807W

The area is subdivided into five blocks. Block numbers run from East to West numbered one through five.

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FIRST DEPLOYMENT APRIL 1963 - APRIL 1964

Because of the high priority of the Cuban requirements in 1962, the USS OXFORD had been diverted to conduct operations in the Cuban area pending the final acquisition of an MSTTS ship. When the work of converting the MULLER was delayed beyond schedule, the OXFORD had to depart the Cuban waters for shipyard overhaul. In the interim, the USS TANNER was assigned to cover the area until relieved by the MULLER. In April 1963 the USNS MULLER commenced operations.

During this first deployment, USN-856 intercepted considerable Microwave and VHF targets which were almost, without exception, unattainable from any land-based sites. Almost all intelligence on Cuba's western Army provided through COMINT was produced through the intercept of the VHF multichannel communications.

On 21 April 1964 the ship sailed to Tampa, Florida to undergo its first annual overhaul.

SECOND DEPLOYMENT MAY 1964 - APRIL 1965

On 19 May the MULLER sailed from the shipyards to resume her normal mission off the Cuban coast.

During this deployment, USN-856 provided almost all intelligence on Cuba's western Army, on the department of public order, on ship/ship and ship/shore activities in the Havana area, as well as considerable information on the Cuban air defense facilities and then recently expanded DVPC.

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PL 86-36/50 USC 3605

From a technical standpoint, the ship's intercept permitted the recovery of such traffic analytic items as callsigns, covernames, and functional trinomes following major changes in their usage.

THIRD DEPLOYMENT MAY 1965 - MAY 1966

The USNS MULLER returned to operations on 21 May 1965 when she relieved the USS GEORGETOWN in Key West. Operating 6-10 miles off the northern coast of Cuba, the ship was tasked to intercept the Cuban UHF microwave and associated VHF feeders, single channel VHF radiotelephone signals, [redacted] HF radiotelephone and manual morse communications. USN-856 was also tasked with the processing and reporting of items of perishable intelligence passed by any of the Cuban military or paramilitary on these communications facilities.

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During this deployment, USN-856 provided a large amount of intelligence on the Cuban western and central armies, Cuban navy ship/ship and ship/shore activities in the Havana area, as well as considerable information on the Cuban air and air defense facilities. In addition, unique radar signals were obtained from the Havana area, including S-band, Fan Song, Low Sieve, Sheet Bend, Pork Trough, AA Fire Control and cruise-missile-associated emitters in the Havana province.

USN-856 also participated in the CINCLANT Caribbean Advisory Warning Plan in which the ship provided near real-time reporting in support of U.S. Reconnaissance missions flown over and around Cuba. Reflections of high-altitude U-2 flights, as well as tactical aircraft pre-flight information essential to reconnaissance planning purposes were provided.

FOURTH DEPLOYMENT JUNE 1966 - MAY 1967

On 29 June 1966, the USNS MULLER, on completion of drydock and overhaul in New York, relieved the USS GEORGETOWN at Key West and resumed her Cuban mission.

During this deployment the MULLER continued to be the main source of microwave COMINT. Contributions by USN-856 included: information on organization structure of high level command echelons in Cuba; information on Cuban cryptosystems, troop movements, exercises, personalities, and military aircraft; initial identification of the "PU-21" as a launching mechanism of a rocket carried by Mig 17 aircraft; collection of a [REDACTED]

[REDACTED] and the central naval district was accomplished; clarification that Santa Clara airbase received nine Mig 17 and five Mig 15 aircraft from the Soviet Union; information relating to Cuban reaction to the abortive GLASS LAMP reconnaissance mission on 30 November which deviated from its track and ultimately crashed in Bolivia; and information pertaining to the new location of Cuban cruise missile headquarters at Mariel.

Muller Generator Casualty

On 11 July, the USNS MULLER, having just completed overhaul, reported failure of 2 generators. COMSTSLANT directed the ship to remain far enough from the coast to preclude drifting into Cuban territorial waters before a tow could be arranged.

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While awaiting tow, the ship established a pattern of drifting for approximately eight hours while all power was shifted to the Research Operations spaces, and then returning to its original position by shifting all ship's power back to its engines. Eventually the SIGINT mission was terminated due to the unreliable power source and the non-hearability of most targets.

The following day, the USS EATON took the MULLER in tow to Key West where repairs were completed on 29 July.

Underwater Hull Inspection

In July 1966, DIRNSA, under the recommendation of the COMILDEPT (USN-856) requested COMSTSLANT initiate hull inspections prior to departure from each port to check for any foreign objects which might be attached to the ship.

COMSTSLANT in turn recommended that members of the MULLER's MILDEPT and NSG personnel be trained to accomplish hull inspection rather than contracted personnel because this could offer an opportunity to attach objects to the hull as well as draw undesirable attention to the ship.

DIRNAVSECGRU objected to the use of NSA personnel for this task and recommended use of shore-based military personnel. COMSTS Port Canaveral subsequently arranged for in-port diving services to accomplish hull inspection and the MULLER was directed to report satisfactory completion of the job in the first SITREP following the inspection.

FIFTH DEPLOYMENT JUNE 1967-JUNE 1968

On 22 June, the USNS MULLER relieved the USS GEORGETOWN at Key West and resumed her normal Cuban collection operations.

Presidential Flight - On 7 April 1967, DIRNSA advised USN-856 of the proposed flight plan of the Presidential plane which would convey the Chief Executive to and from the Hemispheric Summit Conference in Punta del Este, Uruguay 13-14 April and requested that USN-856 advise of any reflections of Cuban reaction to the flight and report any movement of Cuban Mig 21/19 aircraft into eastern Cuba.

The following day, special tasking which placed emphasis on designated targets which were most likely to reflect Cuban knowledge of or reaction to President Johnson's trip and modifications were made to the CINCLANT Advisory Warning Plan (CLAWP) to include warning of any hostile intent by Cuban fighter aircraft towards Air Force One.

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Soviet Space Event -- In August 1967, USN 856 was directed to search for communications [redacted]

[redacted] on a time available basis because of a strong possibility that the Soviet Space Event Support Ship (SSESS) KOMONAUT VLADIMIR KOMAROV, enroute Havana might participate in [redacted] while in the area. Special tasking was assigned to the MULLER on 7 September.

With the prediction that a Soviet space event would take place in the near future, one possible problem came to light. As long as the KOMAROV remained stationary and the MULLER on station, the coverage could be maintained. If, however, the KOMAROV departed for the Caribbean we [redacted]

[redacted] One suggested solution was to divert the MULLER from her current collection task in order to shadow the KOMAROV until another vessel could relieve her. This possibility was considered unfeasible and deemed unnecessary later when the anticipated space event did not occur.

In late September, arrangements were made by NSA/NSG to augment USN-856's collection capability for required FDM/Telemetry signals and in early October, the equipment and requirements were delivered to the ship. On 6 December, special telemetry and ELINT operations assigned to USN-856 were suspended due to the departure of the KOMAROV from Havana. However, collection requirements were reestablished several times when the KOMAROV returned to Havana.

Actions Resulting from the PUEBLO Incident -- On 23 January the USNS MULLER was directed to depart her station and proceed immediately to Key West to await further orders. This diversion was precipitated by the seizure of the USS PUEBLO and fear that the Cubans might attempt to emulate the North Koreans while the allegations about that circumstance were still unsettled.

The ship put into Port Everglades shortly thereafter where offloading of all excess material and document inventory was accomplished. The MULLER, scheduled to sail on 31 January, was repeatedly delayed in port and did not resume operations until 20 February.

During the in port period, the MULLER was assigned destroyer escort. CINCLANTFLT OPOD 2130 (USNS MULLER Protective Operations) was published. This document established the responsibilities of all commands and their mission: "To provide protective cover for USNS MULLER which may conduct intelligence collection operations in international waters off the coast of Cuba without unduly

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exposing herself to harassment, possible boarding, or attack by Cuban forces." COMCRUDESANT, COMSECONDFLT, and COMASWFORLANT were directed to provide destroyers as scheduled by CINCLANTFLT. The USS SARSFIELD was designated MULLER's initial escort.

The MULLER was accompanied by an escort at all times until her final recall in October 1969. The three destroyers assigned normally operated outboard of the MULLER but within quick reaction range for periods of no less than five days.

The special provisioning and refueling requirements of the destroyers necessitated several changes to the schedule routine the ship had previously employed (see Section 5, p. 103).

SIXTH DEPLOYMENT AUGUST 1968-OCTOBER 1969

On 6 August 1968, the USNS MULLER commenced what was to be her last deployment. USN-856 was routinely assigned collection of Cuban UHF microwave, VHF multichannel, [redacted], VHF single channel R/T, manual morse, VHF/UHF multichannel, and periodic coverage of Soviet Sputniks, [redacted] communications in the Havana area.

On 16-17 December the ship was off-station in dry dock in Tampa, Florida undergoing repairs to generators.

In January 1969 the ship had installed antenna, tone intelligence units and a speech processing unit to meet the urgent requirements of the CINCLANT Advisory Warning Plan and a [redacted] position for internal advisory warning.

Deactivation of the USNS MULLER

In July 1969, CNO in response to the proposed Navy FY-70 reduction in funding, recommended the immediate inactivation of the USNS VALDEZ and USNS MULLER. The MULLER was due for her annual yard overhaul in September, but due to CNO's proposal to withhold obligational authority to cover her operations, COMSTS recommended the ship be diverted as soon as possible to NORVA to commence stripping operations.

On 22 August, DIRNSA, in order to maintain continuity on Cuban targets, requested the MULLER remain on station until a relief ship could be assigned. As Navy's Project 703 encompassed all the TRSs, no ship became available and COMSTS requiring several weeks to deactivate directed the

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ship depart station on 10 October and proceed to Norfolk.

The ship arrived on 16 October and removal of the sponsor's equipment began immediately. On 28 October USN-856 was deactivated.

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CHRONOLOGY OF CRUISES BY SHIP

USS OXFORD (USN-850/AGTR-1)

04 January 1962 - 08 May 1962	(^{STET} East coast) South America
16 July 1962 - 02 March 1963	Cuba
May 1963 - 06 September 1963	(^{STET} East coast) South America
31 December 1963 - 31 June 1964	Caribbean
19 February 1964 - 10 June 1964	(^{STET} West coast) South America
05 August 1964 - 02 December 1964	(^{STET} West coast) South America
03 February 1965 - 03 June 1965	(^{STET} West/East coast) Africa (Subic) ^{STET}
17 June 1965 - 31 August 1965	South China Sea
25 September 1965 - 31 October 1965	Bay of Bengal
11 November 1965 - 18 December 1965	South China Sea
16 February 1966 - 05 March 1966	Transit to Koushiung
12 March 1966 - 05 June 1966	South China Sea
19 June 1966 - 28 July 1966	South China Sea
12 August 1966 - 07 September 1966	South China Sea
13 September - 28 October 1966	Manila Bay
03 November 1966 - 6 December 1966	South China Sea
13 December 1966 - 12 January 1967	South China Sea
23 January 1967 - 24 April 1967	South China Sea
05 May 1967 - 03 July 1967	South China Sea
20 September 1967 - 29 November 1967	South China Sea
12 December 1967 - 15 March 1968	South China Sea
18 April 1968 - 17 July 1968	South China Sea

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28 July 1968 - 23 August 1968	South China Sea
21 September 1968 - 21 December 1968	South China Sea
03 January 1969 - 09 April 1969	South China Sea
24 April 1969 - 27 July 1969	South China Sea
11 August 1969 - 03 November 1969	South China Sea

DEACTIVATED

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USS GEORGETOWN (USN-852/AGTR-2)

19 April 1964 - 26 May 1964	Havana
01 July 1964 - 26 October 1964	(^{stet} East coast) South America
06 January 1965 - 30 March 1965	(West coast) Carribian/South America-Key West
03 April 1965 - 08 May 1965	Havana
21 July 1965 - 13 October 1965	(^{stet} East coast) South America
15 December 1965 - 07 March 1966	(^{stet} North coast) South America
18 May 1966 - 30 June 1966	Havana
05 July 1966 - 23 August 1966	Central America
05 October 1966 - 21 December 1966	(North Coast) South America
08 March 1967 - 13 May 1967	(North coast) South America
16 May 1967 - 30 June 1967	Havana
17 October 1967 - 04 November 1967	Refresher training GTMO
07 November 1967 - 22 November 1967	Rodman Cahal Zone
23 November 1967 - 13 December 1967	Transit to Med for Cyprus ✓ crisis
16 December 1967 - 26 March 1968	Mediterranean Ops ✓
08 June 1968 - 09 August 1968	Havana
18 September 1968 - 05 October 1968	Caribbean
06 October 1968 - 27 January 1969	(East coast) Africa/Indian Ocean/Gayana
28 January 1969 - 07 March 1969	South Atlantic-Brazil-Carribbean-Norva

DEACTIVATED

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USS JAMESTOWN (USN-853/AGTR-3)

09 April 1964 - 17 August 1964 Norfolk-Med-East Coast ^{STET}
Africa-Norva
14 October 1964 - 03 February 1965 ^{STET} (West coast) Africa
24 March 1965 - 23 July 1965 ^{STET} (East/West coast) South
America
23 October 1965 - 02 January 1966 Transit to Subic via ^{STET}
Panama Canal and Pearl Harbor
07 January 1966 - 01 April 1966 South China Sea off S. Vietnam
22 April 1966 - 03 July 1966 South China Sea
14 July 1966 - 30 September 1966 South China Sea
11 October 1966 - 23 December 1966 South China Sea
31 December 1966 - 02 February 1967 South China Sea
12 April 1967 - 11 July 1967 South China Sea
07 August 1967 - 13 November 1967 South China Sea
19 November 1967 - 20 February 1968 South China Sea
03 March 1968 - 13 June 1968 South China Sea
02 July 1968 - 30 September 1968 South China Sea
17 October 1968 - 15 January 1969 South China Sea
07 February 1969 - 17 March 1969 South China Sea
31 March 1969 - 30 June 1969 South China Sea
18 July 1969 - 18 October 1969 South China Sea

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USS BELMONT (USN-854/AGTR-4)

02 December 1964 - 21 December 1964	^{STET} Bremerton Norfolk
18 January 1965 - 01 March 1965	Shakedown cruise to GTMO
26 April 1965 - 16 July 1965	Dominican Republic
15 September 1965 - 28 January 1966	^{STET} (West coast) South America
17 March 1966 - 19 July 1966	^{STET} (West coast) South America (28 May - 02 July <input type="checkbox"/> <input type="checkbox"/>
08 September 1966 - 14 November 1966	^{STET} (Northwest coast) South America
02 February 1967 - 08 June 1967	Circumnavigation South America
15 August 1967 - 03 October 1967	^{STET} (West coast) Africa
04 October 1967 - 16 November 1967	^{STET} (East coast) Africa
17 November 1967 - 14 December 1967	^{STET} (West coast) Africa transit to CONUS
15 May 1968 - 14 June 1968	Refresher training at GTMO
15 June 1968 - 25 September 1968	^{STET} (West coast) Africa
26 September 1968 - 30 October 1968	^{STET} Indian Ocean/West/ (West coast) Africa
31 October 1968 - 28 November 1968	^{STET} Transit South Atlantic/ (East coast) South America Caribbean/Norva
18 June 1969 - 30 October 1969	Mediterranean ✓

DEACTIVATED

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USS LIBERTY (USN-855/AGTR-5)

05 February 1965 - 25 February 1965:	Bremerton - Norfolk
29 March 1965 - 24 April 1965:	Shakedown at GTMO
15 June 1965 - 27 October 1965:	^{STET} (West coast) Africa to Capeton
03 January 1966 - 21 March 1966:	^{STET} (West coast) Africa: Luanda
31 May 1966 - 30 August 1966:	^{STET} (West coast) Africa:
01 November 1966 - 28 February 1967:	^{STET} (West coast) Africa:
03 May 1967 - 24 May 1967:	^{STET} (West coast) Africa: Abidjan
01 June 1967 - 08 June 1967:	Mediterranean ops: (Torpedoed during Arab- Israeli crisis and subsequently deactivate)

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USNS VALDEZ (USN-851/T-AG-169)

December 1961 - February 1962	South Atlantic-Capetown
February 1962 - September 1962	West coast Africa:
October 1962 - March 1963	West coast Africa:
08 March 1963 - 24 January 1964	West coast Africa:
26 February 1964 - 09 August 1964	West coast Africa: <i>ST</i>
16 August 1964 - 10 February 1965	East coast Africa:
21 March 1965 - 20 October 1965	East coast Africa:
26 October 1965 - 15 December 1965	West coast Africa:
27 December 1965 - 24 May 1966	East coast Africa:
21 June 1966 - 10 October 1966	East coast Africa:
20 October 1966 - 13 December 1966	West coast Africa:
03 January 1967 - 30 March 1967	East coast Africa:
09 April 1967 - 16 April 1967	Red Sea-Suez Canal:
21 April 1967 - 22 May 1967	Mediterranean ✓
18 December 1967 - 16 May 1968	<i>ST</i> (East) Africa:
17 May 1968 - 28 August 1968	(West coast) Africa:
29 August 1968 - 18 September 1968	Transit to CONUS for overhaul
23 January 1969 - 18 February 1969	Caribbean operations
19 February 1969 - 26 August 1969	<i>ST</i> (West coast) Africa:
27 August 1969 - 18 September 1969	Transit to CONUS:

DEACTIVATED

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USNS MULLER (USN-856/T-AG-171)

30 April 1963 - 21 April 1964	Havana:
26 May 1964 - 01 April 1965	Havana:
10 May 1965 - 21 May 1966	Havana:
02 July 1966 - 15 May 1967	Havana:
25 June 1967 - 11 June 1968	Havana:
06 August 1968 - 07 October 1969	Havana:

DEACTIVATED

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RATIO OF ON-STATION TIME BY SHIP

USS OXFORD (USN-850) 1967-1969

1967

ON STATION 66%

OFF STATION 33%

* 80 days off station for annual overhaul in Japan and further delay due to engine failure.

1968

ON STATION 73%

OFF STATION 27%

* 33 Days delay in Subic, P.I. for engine repairs.

1969 (308 days only)

ON STATION 79%

OFF STATION 11%

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USS GEORGETOWN (USN-852) 1967-1969

1967

ON STATION 38%

OFF STATION 62%*

- * 66 days in Norfolk, Va. for normal RAV.
- 109 days in Norfolk, Va. for annual overhaul.

1968

ON STATION 51%

OFF STATION 49%

- * 13 days delay in Naples, Italy due to USS PUEBLO incident.
- 74 days in Norfolk, Va. for normal RAV.
- 74 days in Norfolk, Va. for normal RAV.

1969 (only 63 days)

ON STATION 85%

OFF STATION 15%

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USS JAMESTOWN (USN-853) 1967-1969

1967

ON STATION 64%

OFF STATION 36%

- * 69 days for overhaul at Yokosuka, Japan
- 27 days in Subic for engine repairs.

1968

ON STATION 81%

OFF STATION 19%*

- * 17 days in Subic due to generator failure.

1969 (291 days only)

ON STATION 78%

OFF STATION 22%

- * 23 days in Subic for engine repairs.
- 18 days in Subic for upkeep.

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USS BELMONT (USN-854) 1967-1969

1967

ON STATION 48%

OFF STATION 52%

- * 32 days in Norfolk, Va. for normal RAV..
- 67 days in Norfolk, Va. for normal RAV..

1968

ON STATION 34%

OFF STATION 66%*

- * 105 days annual overhaul/refreshers training.
- 14 days in Tema, Ghana for engine repairs.
- 33 days in Norfolk, Va. for normal RAV..

1969 (304 days only)

ON STATION 34%

OFF STATION 66%*

- * 140 days in port Norfolk.

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USS LIBERTY (USN-855) 1966:

1966

ON STATION 51%

OFF STATION 49%*

- * 72 days annual overhaul
53 days in Norfolk, Va. for RAV.

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USNS VALDEZ (USN-851) 1967-1969

1967

ON STATION 59%

OFF STATION 41%*

- * 86 days state-side overhaul in New York.
- 6 days in Luanda, Angola for engine repairs.

1968

ON STATION 55%

OFF STATION 45%*

- * 91 days in Norfolk, Va. for TRSSCOMM repairs.

1969 (261 days only)

ON STATION 54%

OFF STATION 36%*

- * 35 days in port New York for TRSS COMM repairs.
- 26 days in Monrovia, Liberia for transmitter repairs.

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USNS MULLER (USN-856) 1967-1969

1967

ON STATION 58%

OFF STATION 42%*

- * 23 days for yard overhaul in Florida.
- 40 days annual overhaul.

1968

ON STATION 52%

OFF STATION 48%*

- * 24 days in port due to PUEBLO incident.
- 12 days in Key West due to engine failure.
- 42 days annual overhaul in Hoboken, N.J.
- 14 days in Tampa, Florida for generator repairs.

1969 (289 days only)

ON STATION 63%

OFF STATION 37%*

- * 41 days for installation of destruct and scuttle devises.
- 4 days for cooling system repairs.
- 4 days for bidder's survey.

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SECTION 5

CONSIDERATIONS AFFECTING OPERATIONS

MSTS AND MONTHLY SCHEDULE SUBMISSIONS

The monthly preparation and submission of schedules by NSA for the MSTS vessels (USNS VALDEZ and USNS MULLER), resulted in a recurring problem. The monthly schedules were prepared and submitted according to the informal guidelines established when the ships first joined the cryptologic fleet (i.e., NSA prepared schedules for the following month and coordinated them informally with MSTSANT before submitting them through official channels to JCS). This procedure continued after scheduling procedures were defined and documented in JCS-SM-701-68, "NICE TIME". On numerous occasions, proposed schedules were subject to modifications at the request of MSTS. These changes appeared inconsistent with the informal guidelines developed in the past and caused an excessive amount of communications in finalizing the schedules.

A TDY visit to HQMSTSANT in Brooklyn, N.Y. was arranged in order to discuss the development of schedules (the USNS MULLER's in particular). The meeting took place on 01 November 1968 with Mrssrs. E. Breslin K12, R. Marshall G51, and Lt. D. Sanders G04 in attendance.(5)

It was agreed that the operating ratio should be maintained at no more than 25 days at sea following 5 days in Port Everglades. This was the MSTS requirement for normal operations - for occasional operational requirements, MSTS would not object to a slight extension of on-station time beyond the 25 day operating period.

Because of provisioning and refueling requirements for the MULLER and her escort, MSTS requested the 25 day at-sea period be subdivided as follows: 1 day enroute from Port Everglades to station; 9 days on-station (ninth day for visit at Key West Buoy for mail etc.); 4 days on-station; 1 day to Key West for water and return to station; 9 days on-station; 1 day return to Port Everglades. The 5 days in Port Everglades included the day of arrival and day of departure. Naturally, due to normal constraints, this schedule would be interrupted from time to time, but it was deemed impractical to deliberately vary the pattern without sound justification.

(5) K12 Memorandum for the Record dtd 15 November 1968, "TDY Visit to HQMSTSANT, Brooklyn, N.Y.".

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MSTS preferred that arrivals to and departures from ports be restricted to days other than Saturday, Sunday or holidays. Though such timing had little cost effect on the MSTS crew personnel, additional costs for tugs, berthing, stevedore support, etc., made these arrivals and departures expensive. However, MSTS agreed to support these arrivals and departures in emergency or urgent operational situations.

MSTS would not support the need for an overnight port call in Key West (once standard operating procedure), except in the case of an emergency or urgent operational requirement. MSTS allowed only 5 days in port liberty for each 25 days at sea; any additional in port time would reduce the 5 day port call in Port Everglades. Since the majority of the MSTS crew maintain homes and families in Port Everglades, port calls elsewhere could result in a morale problem.

The one-day port call in Key West for water and provisioning took place mostly during day light hours. The ship normally departed Key West at 2030 hours, so as to arrive on station at the first light of morning. Due to the sensitive scrutiny given the ship by the Cubans, MSTS desired arrival on station during daylight to avoid any possible over-reaction by the Cubans to a ship approaching at night.

In the event of the threat of extreme weather conditions, the MULLER would normally head for Port Everglades and ride out the storm in port. Attempt to avoid the storm by transiting westerly toward the Gulf of Mexico would place the ship in the path normally followed by tropical storms in this area. Transiting eastward placed the ship in dangerous shoal waters. Additionally, 7 knots (speed of ship) was insufficient to maintain a heading against the heavy wind and seas which normally extend far beyond the actual eye of the storm. It was agreed that NSA would be advised immediately of the departure of the ship in the event of a storm threat, and that the decision to move the ship in this situation was a command decision for the Master (skipper)/MSTS.

With full appreciation that NSA desired maximum on-station time, and in view of the numerous administrative and logistical constraints, MSTS informally proposed that MSTS prepare and forward the initial monthly schedule to NSA for review and modification/concurrence, instead of the reverse which had been the standard operating procedure. Upon coordination/concurrence, the proposed schedule would be forwarded in accordance with NICE TIME procedures. It was also agreed that schedule modifications proposed by

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NSA should include the unclassified reason for the change: (e.g. "urgent technical requirement, embark visitors", etc); so that MSTs could better appreciate NSA's needs and more effectively coordinate internal MSTs requirements.

This proposal was formally made to and accepted by NSA.

In concluding the meeting, MSTs requested that NSA representatives visit MSTs approximately every six months for coordination of operations.

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ABRUPT CHANGES IN SCHEDULES:

Early publication of monthly schedules was necessary to allow ample time for MSTs and Navy to coordinate, through maritime and commercial authorities, the availability of berth, tug support, and delivery of perishable food and other supplies, etc., with the arrival and departures of other vessels.

Abrupt changes in schedules also involved other agencies such as the U.S. State Department in arranging for port clearances and visas for personnel joining the ship at foreign ports.

In emergency or quick reaction situations these inconveniences could not be avoided but it was generally recognized that mid-stream changes in schedules required strong justification.

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CONVERSION TO MSTs

The use of AGTRs as TRSs (entirely Navy manned) was challenged in November 1963 and again in February 1964 by RADM J.W. Ailes III, Commander, Service Force, Atlantic Fleet. His objection was based on the use of naval personnel and naval fleet units for support of non-military operations including the collection of foreign communications. This objection was supported by CINCLANTFLT (ADM H.P. Smith).

The objection was forwarded to CNO with a proposal to convert the TRSs to MSTs operations in support of NSA's requirements thus releasing the involved Navy billets for fleet operations. (6)

The recommendation was rejected by CNO in June 1964, but was subsequently approved by that office in November 1964. At that time CNO directed a program be prepared for an orderly transfer of the Navy's responsibility for operation of the AGTRs to MSTs.

The Bureau of Ships estimated the cost for conversion at 1.4 million per ship and the time in the yard to accomplish conversion at 4 months. MSTs estimated annual operating cost for the three Liberty ships at 1.42 million and the two Victory ships at 1.65 million. (7)

NSG and NSA then met to develop a schedule of conversion that would allow for the fullest use of existing resources against assigned targets.

The plans for modification of the ships to accommodate civilian crews bogged down in 1966 for the following reasons: NSG, going on the assumption that the ships would be manned by units of specified numbers, obtained an estimate of costs to convert all 5 TRSs from the BUSHIPS. The estimate, in April 1965, of eight million dollars for expenditure in FY68 was subsequently approved by SECDEF in a PCR of 21 December 1966. However, in 1966, in addition to other alterations, the number of personnel to be accommodated rose from 735 to 813 and it became apparent the basis for SECDEF's approval for conversion was unrealistic.

(6) COMSERVLANT ser: 70/00368 dtd 21 November 1963, "Use of Fleet Units in Support of Non-Military Operations".

(7) BUSHIPS ltr ser: 44-042, dtd 29 May 1965.

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The revised estimate came to 28.7 million. This included increased manning figures, habitability improvements, addition of machine automation equipment and Coast Guard certification. Subsequently it was decided that it was not feasible to convert five ships in one year and in view of the fact that only eight million was included in FY67 CCP for conversion of all five ships it was necessary for Navy to reprogram its manpower resources in FY68 to provide for continued operation of these ships during that fiscal year.

Both NSA's and Navy's proposed programs for conversion demonstrated the advantages of operating under MSTs in peacetime conditions. Operational days per year under MSTs operation would be 259 compared to 193 under Navy operation.

NSA's proposal, however, called for conversion of only the two Victory ships with an estimated life expectancy of ten more years. If accepted, this program would require that one ship be out of operation for most of FY68 and one for seven months in FY69. Under the Navy program one ship would be out for most of FY68 and three in FY69 and one in FY70.

When the above proposals were submitted to the OSD Review Group during the CCP submission 67-73, the group decided that the operational need for the AGTRs would not decline in the coming years and that until the hostilities in Southeast Asia were terminated, it would not be feasible to allow any ship to be out of service during FY69.

Therefore, the Review Group recommended the 5 AGTRs continue to be operated by the Navy and that NSA's program in SE44/59 be adjusted accordingly.

The recommendation was subsequently approved by SECDEF.

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IMPACT ON SIGINT EFFORT AS A RESULT OF CLOSURE OF SOUTH AFRICAN PORTS TO U.S. NAVAL VESSELS

As a result of an incident involving U.S. Military personnel from the USS ROOSEVELT while in Capetown, South Africa in Feb 67, the U.S. State Department announced the unofficial closure of South African ports to U.S. ships.

Until this time, two TRSs were normally deployed to conduct electronic research off both African coasts. Coverage of the west coast was accomplished by rotation of the AGTRs which normally operated in west African waters on a four month deployment from their home port in the U.S.. These ships occasionally visited ports in the Republic of South Africa for crew recreation and logistic support but were not dependent upon these ports for operations. The VALDEZ, on the other hand, had operated solely in African waters for 5 years. General logistic support, voyage repairs, electronic repairs, recreation and yearly overhauls were all accomplished at ports in the Republic of South Africa. During 1966 alone, the VALDEZ made 6 visits to Capetown and Durban.

The loss of these ports reduced VALDEZ's on-station time by requiring long transits to and from suitable ports for overhaul and logistics. The material reliability of the ship was reduced as voyage repair facilities were reduced in quality and there was an increase in cost and time for VALDEZ's surface and air logistics support now coming from the U.S. to other African ports where the service was erratic. (8)

On 20 March, NSA sent a memorandum to DDR&E to make certain that cryptologic platform use of South African ports was known to DOD. This memo again stressed the importance of these ports to the operations of TRSs in Africa; the USNS VALDEZ in particular.

"The USNS VALDEZ consistently uses South African ports for logistics purposes while operating in that area. These South African ports are the only readily available ones that can provide the necessary logistics and ensure that the VALDEZ remains on-station to accomplish its mission....In addition, the annual overhaul

(8) Department of the Navy Memo dtd 4 March 1967, "DOD Requirement for Facilities and Contractual Support in the Republic of South Africa."

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for the VALDEZ is performed in a South African port by a private South African contractor. This eliminates the requirement of returning the VALDEZ to the CONUS, or a European port, thereby, providing additional on-station time which would be lost by a lengthy cruise to another port for this overhaul. Additionally, loss of use of South African ports would virtually eliminate opportunity for crew's liberty and recreations in ports that are both desirable and in consonance with the most efficient ship's scheduling. Thus, there is a morale factor involved which has a bearing on both naval enlistment and civilian manning. (9)

NSA's assessment incorporated into DDR&E's paper, as well as studies from Navy, Air Force and NASA, were forwarded on 5 June to the Deputy Secretary of Defense and thence to the Under Secretary of the State Department for review.

In the interim, NSA began an exchange of correspondence with CNO and MSTs in order to develop mutually acceptable plans for maximum use of the extremely limited port facilities.

On 27 April 1967, COMSTS provided CNO with comments and recommendations for alternative solutions:

"Review of African ports indicates the following ports on the east coast of Africa can provide limited support: Mogadiscio, Somalia; Mombasa, Kenya; Dar es Salaam, Tanganyika; Biera and Lourenco Marques, Mozambique; Diego Suarez and Tananarive, Madagascar.... Bombay, India and Port Said, Egypt can offer a higher level of ship repair support. On the west coast of Africa the following ports offer limited support: Lobito and Luanda, Angola; Lagos, Nigeria; Monrovia, Liberia; Freetown, Sierra Leone; Dakar, Senegal..... Other west African ports such as Accra, Ghana, Libreville etc. can be used on occasion but are less desirable. Rio de Janeiro, San Juan, CONUS are alternatives." (10)

(9) DIRNSA Memorandum to DDR&E, dtd 20 March 1967, "DOD REQUIREMENTS FOR FACILITIES AND CONTRACTUAL SUPPORT IN THE REPUBLIC OF SOUTH AFRICA (U) "...

(10) COMSTS 261324Z April 1967, "AGTR/MSTS Deployments".

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While the USS BELMONT was successful in completion of her primary mission, the cruise pointed out a problem that would have to be faced in subsequent Mediterranean missions. The Mediterranean coastal areas of high interest are also the areas where potential risk to our resources is greatest. Since the 50 NM restriction off North African and Mid-East coastal areas prevented collection of short haul, line-of-sight communications (VHF/UHF), the usefulness of shipborne collection in these areas was questionable.

The USS BELMONT's summer cruise was the last by a TRS in the Mediterranean prior to deactivation of all TRSs in the fall of 1969. As long as the Mid-East remains politically unstable, any type of coastal mobile reconnaissance operations in these areas may be subjected to imposed restrictions resulting in the question of whether results can justify the potential risk.

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ESCORT AND PROTECTIVE OPERATIONS

When the first TRSs were introduced to the shipborne collection program, they were not armed for two primary reasons: (1) an unarmed vessel would provoke less reaction from target countries than an armed one; and (2) it would be free of the restrictions applied to U.S. warships in foreign ports.

For six years, the TRSs operated in relative obscurity. However, the subsequent USS LIBERTY and USS PUEBLO incidents and attending publicity, brought the U.S. shipborne collection effort to the attention of the world. The TRSs, slow and unarmed, were suddenly found to be inadequate for operations in high risk areas. Also, there was an increased sensitivity towards these ships and their operations by the target countries.

The immediate solution to the problem was to provide the ships with the protection they needed in order to carry out their operations without undue risk to the ships themselves. This was a command decision and took the form, in certain instances, of armed escorts (usually DDs) and air cover.

There was initial concern over the question of whether the appearance of an armed vessel in company with a TRS might not provoke the very hostile reaction we were trying to avoid. It was deemed however, that if the role of the DD escort was fairly passive, i.e., it remained outboard of the TRS, maintaining a loose patrol and not close in unless requested to do so by the TRS, it probably would not cause overt hostile reaction.

As a result of the North Korean capture of the USS PUEBLO in January 1968, the USNS MULLER, operating off the coast of Cuba, was assigned a destroyer escort as a deterrent to any similar seizure attempts by the Cubans.

The mission of the escort was to provide protective cover for the USNS MULLER in order that she could conduct intelligence collection operation in international waters off the coast of Cuba without unduly exposing herself to harassment, attack, or boarding by Cuban forces.

"Enclosure (7) to CINCLANT letter serial 000278/331 of 15 September 1966... provided guidance for protective measures to be taken in applying the right of self-preservation in peacetime and rules of engagement for Cuba. In addition to these rules, the following rules of engagement were provided:

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(1) If for some reason MULLER is forced to enter Cuban territorial waters, the commanding officer of the escort is authorized to pursue.

(2) In the event of an engineering or other casualty to MULLER which causes the ship to drift into Cuban territorial waters, every effort shall be made to tow the MULLER into international waters. The escort vessel, in any case, will remain with MULLER to provide protection in the event the MULLER drifts into Cuban territorial waters.

(3) In the event Cuban forces are declared hostile... U.S. forces in self-defense, may deliver such fire and perform such tactics as are necessary to provide for defense of MULLER as well as themselves, including firing into Cuban territorial waters and airspace." (20)

The destroyer escort assigned to the MULLER normally maintained a loose patrol 4-8 miles outboard of the ship whenever she moved South of 24 degrees North. The destroyer assignments for duty were levied by COMSECONDFLT and COMASWFORLANT on a quarterly basis.

In addition to the destroyer, fighter aircraft, as made available to COMKWESTFOR, were put on alert. These aircraft were expected to be on station approximately 10 minutes after call and had an estimated stay time of approximately 1 hour and 20 minutes.

The requirement for destroyer escort, which remained in effect until the MULLER discontinued operations, though not hampering MULLER's activities to any extent, did result in several changes in her routine.

The destroyer, according to Navy regulations, had to maintain 70% of its fuel at all times. This made it necessary for the escort to leave station to refuel at Key West approximately every 9 days. This, of course, affected the MULLER, not allowed to remain south of 24 degrees North without her escort.

Situations occurred, such as attempted Soviet lunar launches, that required the MULLER to be on station during a period when she was scheduled to be in Key West with her escort. Normally, a schedule modification for the MULLER would quickly amend the situation, but in view of the escort, two schedules had to be taken into account.

(20) CINCLANTFLT 022304Z February 1968, CINCLANT OPORD 2130, "USNS MULLER PROTECTIVE OPERATIONS".

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In urgent situations however, the destroyer could remain on station longer, or, if lead-time permitted, be brought into Key West early for fueling. During several instances when rescheduling of the escort was necessary in order to satisfy high priority technical requirements, NSA found CINCLANT most helpful in assisting in the arrangements.

Like the MULLER, the USS GEORGETOWN, conducting operations in the Mediterranean at the time of the PUEBLO incident, was assigned a destroyer escort. ADMINO CINCUSNAVEUR in January 1968, directed one destroyer escort provide direct support to USS GEORGETOWN while she operated in area four Foxtrot (along Egypt, Israel, Lebanon, and Syria coastlines). The destroyer was to patrol between GEORGETOWN and the shore, and maintain a CPA of no less than 25 NM. (21)

JCS approved the GEORGETOWN's February reconnaissance schedule with one exception; the escort was to remain 10 NM outboard of GEORGETOWN's track. (22)

On 11 February, one UAR Beagle aircraft made three low passes over the GEORGETOWN. As a result of the overflight, COMSIXTFLEET took further precautionary measures for advisory warning to the ship. In addition, the USS F.D. ROOSEVELT and her escorts the USS PUTNAM and USS CONINGHAM, were placed on one hour notice in support of GEORGETOWN's operations. (23) The USS STORMES was assigned as an additional escort for the ROOSEVELT. The USS TALAHATCHIE COUNTY was placed on two hour standby. Further, one VP aircraft was placed on 24 hour coverage to maintain and document a continuous navigational plot of the ship.

Later, an SP2H aircraft was assigned to report all surface contacts within 50 NM of the GEORGETOWN. (24)

On 14 February, one VQ-2 aircraft was provided for continuous coverage for warning of enemy action to USS GEORGETOWN and her supporting fleet elements during coastal operations.

(21) CINCUSNAVEUR 291741Z January 1968, "NICETIME".

(22) JCS 8863, 012317Z February 1968, "FEBRUARY 1968: RECONNAISSANCE SCHEDULE".

(23) CINCUSNAVEUR 111135Z February 1968, "NICETIME".

(24) CTF 67 112038Z February 1968.

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Unlike the USNS MULLER, the USS GEORGETOWN's CPA's were increased in addition to the escort. Overall, her Mediterranean coastal operations were unsuccessful primarily due to the increased CPA's. Although her escort did not hamper her operations, the excessive protective cover involved a number of Mediterranean resources and considerable reaction planning.

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The requirement for escort was dropped as GEORGETOWN moved eastward and eventually out of the Mediterranean.

Again, unlike the USNS MULLER, the USS GEORGETOWN's escort and cover was not to become a routine operation since the Mediterranean was not her permanent operations area.

Evaluation of the two situations (the smooth transition to escort and protective cover by the MULLER; the rapid addition of escort and protective cover perhaps as an over-reaction to the UAR overflight), indicated that requirement of escort for TRSS did not degrade their collection operations, but did point out that escort operations and protective cover planned in advance created less upheaval in fleet operations and allowed for the proper programming of the resources involved.

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INDIAN OCEAN ENVIRONMENT

EO 3.3b(3)
PL 86-36/50 USC 3605

The first diversion of a TRS to support Soviet Space/missile collection efforts in the Indian Ocean took place in October 1967 when the USS BELMONT was diverted from its African coastal mission to attempt coverage of a space vehicle re-entry. At that time G Group stated, "G requirements in African cannot possibly be met if the ships (BELMONT/VALDEZ) are aperiodically diverted from their planned operating areas. (25)

It was generally recognized that the growing interest in the Indian Ocean (an area used by Soviets and probably some time in the future by the Chinese Communists as a space/missile testing/recovery range) would require additional collection efforts in this area. Long range plans called for a strategic Indian Ocean Island concept but until such a plan was realized, it was necessary to provide some type of interim coverage. DIRNSA was directed to investigate the acquisition of additional platforms to provide this interim capability. A number of alternatives were open: continued use of [] resources; use of TRSs when available; rehabilitation of the USS LIBERTY for use in the Indian Ocean; and conversion of an MSTC Missile Range Instrumentation Ship to provide a dedicated ship-borne platform for Indian Ocean operations.

As an interim measure, Pacific Fleet [] destroyer escorts were diverted to the Indian Ocean impact area. These diversions involved a transit of 9000 miles each way, and since these vessels were not equipped to perform SIGINT operations on a secondary basis, they were extremely non-productive. NSA then proposed, and JCS subsequently approved, the use of a TRS for satisfaction of Indian Ocean requirements as an additional mission to normal collection off the east coast of Africa in order to relieve the CINCPACFLT resources.

G Group non-concurred with the proposal because:

"...G Group objectives in east coast Africa are unlikely to be met by a platform that is subject to diversion for other tasks, nor can G support any platform required to operate further East than 48 to 50 degrees East....diversion estimates are critical...estimates to date appear to be:

(25) G-1174-67, dtd 20 September 1967. "Diversion of the USS BELMONT (AGTR-4)".

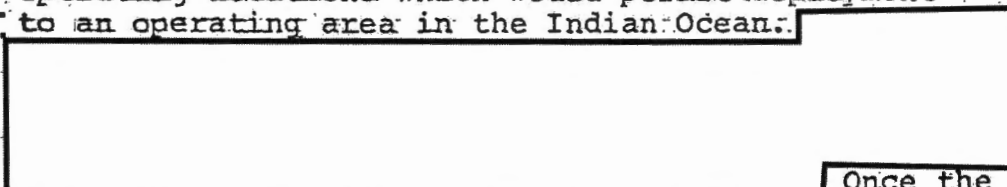
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far too optimistic....any change in configuration and mission to accomodate the Soviet space collection mission and related communications would of necessity be at the expense of G requirements." (26)

When DIRNSA first proposed use of TRSs for satisfaction of Indian Ocean requirements, the decision to do so was based on the following:

"It is visualized that the designated TRS will maintain normal COMINT collection operations in operating locations which would permit deployment to an operating area in the Indian Ocean."



Once the Soviet ships are deployed, the TRS would be required to remain within 6-7 days steaming time of her on-station position (currently 15S-60E)." (27)

Subsequent to the time the above proposal was made and the first diversion occurred, the optimum collection position for the TRS was changed from the space vehicle recovery area (15S/60E) to the space vehicle re-entry area (40S/68E), almost doubling the transit distance and making the seven day time period in which to reach positioning impossible for 2 of the 3 ships involved (i.e. USNS VALDEZ and USS GEORGETOWN).

As it later was seen, G Groups's fears of extended off-station time proved real. In 1967, the USS BELMONT was diverted to the Indian Ocean 18 October - 10 November for a total of 24 days off-station; no launch occurred. In 1968, the BELMONT was again diverted 10 October - 27 October for a total of 18 days off station; no launch occurred. Between 12 November and mid-December 1968, the USS GEORGETOWN was diverted off station for approximately 30 days; all attempts at intercept of space vehicle re-entry were unsuccessful.

(26) G-1308-68, dtd 14 August 1968, "Non-Concurrence of Message Concerning TRS Utilization".

(27) K47-556-68, "Missile/Space collection Platform Proposal".

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It was evident from these three experiences that TRSS were not suitable for re-entry collection. The limits of the operating range prohibited arrival of the ship at the re-entry position even from its normal operating track's southern most tip; the ships lacked adequate telemetry collection packages and operators; severe degradation in the collection of G Group targets occurred as the ships moved out from the coast (in the case of the USS GEORGETOWN, the number of electrical messages containing raw traffic on G Group targets dropped on an average 60% after diversion. The number of electrical messages containing technical exchange information on G Group targets dropped, on an average, 50% after diversion); based on prorated costs, everyday of unproductive operation cost \$4,400; the Indian Ocean was a poor environment for a low powered ship (i.e., VALDEZ and GEORGETOWN) since currents and winds which frequently change direction can seldom be used to the advantage for transits; a cyclone season exists through the months of December, January and February; and finally, shortfuzze underway requirements disrupt maintenance periods in port for boilers and engines already not in the best of repair.

On 14 January 1969, K forwarded a review of the activities surrounding the shipborne collection effort in the Indian Ocean to ADP with the following recommendation: "...of the TRSS only the USS BELMONT should be used to support the Soviet Indian Ocean re-entry collection requirement when on-station off the east coast of Africa." (28)

In that same month, the proposed yearly schedule for TRSS was drafted. This draft proposed the BELMONT operate off East coast Africa in response to G and A/K4 requirements.

In response, G Group stated:

"If the BELMONT is cleared for the east coast of Africa...then A Group should be responsible for the productivity of the cruise and anything coming to G Group considered as incidental. If the BELMONT goes to east Africa, most of the personnel directed to G Group tasks on the BELMONT should be diverted for the duration of the cruise to man unmanned positions at Navy station in accordance with a G Group priority listing." (29)

(28) K-032-68, dtd 14 Jan 69, "G Group memorandum to ADP on the subject of Ship Diversion".

(29) G-0105-69 dtd 21 Jan 69, "Diversion of Shipborne Collection Resources".

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Obviously, neither A Group nor K47 could justify the retention of the BELMONT in the Indian Ocean, and therein lies the basic problem involved in the use of TRSS for collection of Soviet/CHICOM missile/space related communications in the Indian Ocean. TRSS were configured primarily for COMINT collection and were equipped with anywhere from 19-22 position for satisfaction of COMINT requirements. UHF/VHF short-haul, line-of-sight collection (the ships' primary mission) was not possible from the optimum areas for re-entry collection.

The collection problem against the re-entry of a returning circumlunar vehicle was not fully identified and the occurrences were not entirely predictable. Therefore, the mission could not be justified solely for telemetry collection. TRSS were simply too large and expensive a resource to be employed against an undefined and fairly erratic problem.

USNS VALDEZ TELIMETRY CAPABILITY

During the 1968 overhaul period of the USNS VALDEZ in CONUS, it was decided to redeploy the ship to the east coast of Africa to conduct a collection effort against African targets as well as ESV and associated COMINT signals during Soviet space events possible occurring in the Indian Ocean. All this was contingent upon the technical capability of the VALDEZ. However, the collection system then installed did not provide a satisfactory telemetry collection capability.

A minimum acceptable collection capability required was developed by NSA and a search for resources and funds was begun by NSA/NSG.

The VALDEZ prepared to sail to Africa on 22 January 1969 and at that time funds for the proposed telemetry collection package had yet to be identified. To avoid further delay in deployment, installation of the proposed package was planned for an overseas port. However, while the ship was underway the proposal to install a telemetry package aboard the ship was dropped due to the infeasibility of utilizing the slow vessel for the quick reaction type mission.

The USS GEORGETOWN was the last TRS used for collection of missile/space related communications in the Indian Ocean. The USS BELMONT, the only ship designated capable of these missions was deployed to the Mediterranean for her last mission before deactivation.

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SI CLEARANCES FOR MSTTS PERSONNEL

The situation with MSTTS that arose over scheduling, brought to light another difficulty. MSTTS personnel were not cleared for SIGINT. This presented a problem because discussions with MSTTS concerning the ships had to be unclassified. Since MSTTS was not privy to information on the ship's SIGINT operations, they lacked an appreciation for the requirements that necessitated the ship's departure from normal operating procedure. This resulted in misunderstandings concerning what sometimes appeared to be unreasonable requests from DIRNSA. Also, in the past, certain actions taken by MSTTS resulted in less effective SIGINT operations that might have been precluded if MSTTS had adequate information on the mission.

To alleviate the problem, DIRNSA requested that COMNAV-SECGRU take appropriate action to obtain SI clearances for a minimal number of personnel from COMSTSLANT including personnel from the special operations office. (30)

MSTTS subsequently designated COMSTTS, Chief of staff, and 2 special projects personnel as recipients for the clearances. However, before action was completed on this proposal, SECDEF's memorandum to deactivate the TRSS was published and the requirement for these billets was dropped.

(30) DIRNSA 082054Z July 1969, "SIGINT Clearance for MSTTS Personnel".

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COURIER PROBLEM IN AFRICA

In February 1969, a recurring problem involving the disposition of courier material handled by TRSS operating in African waters was addressed by the CO, Research Operations Detachment, USNS VALDEZ.

Until this time, when a ship arrived in Mombasa, Kenya, a courier from the research department had to fly to Nairobi to deliver the outgoing ARFCOS material to the American Embassy and pick up the incoming material. The problem was a matter of security. The couriers traveled in civilian clothes and carried only their military I.D. and government passports. On demand by local military or police authorities to open the package the courier would have no choice but to comply. Though the Kenyan government was traditionally pro-West, the generally unstable conditions throughout Africa made such procedures risky and revelation of some sensitive material could prove extremely embarrassing to the U.S.

USN-851 recommended that the Department of State arrange to have the American Embassy provide courier service to meet the ship on arrival in Mombasa or provide the RSCHOPDET with some kind of authorization which would grant the detachment couriers diplomatic immunity for these trips. (31)

Liaison with the Pouch and Courier Division, U.S. Department of State revealed the fact that the courier service is operated from Washington and is not subject to local controls nor is the service obligated to handle ARFCOS or other Department of Defense courier material beyond the limits of established courier routes. Nairobi, Kenya is a point of entry for State Department courier material and a regular stop on State Department courier routes; there is no U.S. consulate or other post in Mombasa.

The U.S. Embassy in Nairobi had no resources specifically allocated for courier duties and used its own personnel to perform courier functions. It performed similar functions for U.S. naval ships on a courtesy basis when personnel were available.

(31) T-AG-169 ser:014 dtd 13 Feb 69, "Courier Material".

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Taking the above into account, Commander NSG proposed two possible solutions to NSA/ NIC, and DIRARFCOS. The Pouch and Courier Division, U.S. Department of State advised NSG that it could request the Ambassador to Kenya to provide letters of identification for specified couriers of the RSCHOPSDET VALDEZ. These letters would protect the material only and confer no diplomatic immunity on the couriers. Additionally, funds would probably have to be provided to cover commercial air costs between Mombasa and Nairobi...

On the other hand, VALDEZ could discontinue using Mombasa as a courier point while continuing to utilize port facilities there for liberty and dock services. The material would be handled only through African ports where the State Department maintained foreign missions with TOP SECRET CONTROL Officers such as Aden, Mogadiscio, Dar es Salaam, Lourenco Marques and Capetown. This would result in an undesirable accumulation of sensitive material on board the ship and would require rescheduling procedures to arrange for courier drop-offs in ports not normally utilized. (32)

The addressees of the memorandum were asked to comment on the proposals with respect to the adequacy from a standpoint of security and the feasibility from an operational standpoint.

NSA, then involved in an on-going review of the worldwide reconnaissance program, recommended the problem not be addressed at that time. (33) There were no ships operating off east coast Africa then and later events involving deactivation of the TRSSs eliminated the problem for the moment.

If, however, at any time in the future, US Navy vessels conducting a SIGINT mission, operate off east coast Africa, the problem will have to be addressed again.

(32) NSG/G30 ser: 006103, dtd 6 May 1969, "Courier Material for RSCHOPSDET Aboard USNS VALDEZ (T-AG-169)".

(33) K-094, 281728Z May 1969, "MOVEMENT OF COURIER MATERIAL AT MOMBASA KENYA"...

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DOCUMENT CONTROL/DESTRUCT/SCUTTLE

As a result of the PUEBLO incident, a high priority was given to the installation of improved destruction and scuttling system on ships engaged in sensitive operations. This was to be accomplished in two phases: I - Interim/II - Long Range.

CNO established the criteria to be met by these systems to provide that within 30 minutes the destruction process would be so far along that effective destruction would be completed no matter what actions were subsequently taken.

As a basic administrative measure and to keep the volume of classified material at manageable level, each ship was directed to minimize equipment and document holdings prior to each deployment, by transferring non-essential material ashore prior to sailing.

Regarding the problem of document control, NSA established a system of maintaining a current inventory on all classified material aboard each TRS. OPT for this project was P04. These inventories were routinely reviewed and updated at NSA prior to each cruise to insure only material pertinent to the mission was on board.

To further reduce the time and number of devices required for incendiary destruction, the Fleet Commanders in Chief began the transfer of selected classified publications held by the ships to water soluble paper.

In addition, CNO authorized the use of certain existing ordnance devices for destruction purposes. They were the M-3 Destruction Kits permanently installed in the Research Operations spaces of some ships in metal bins which also serve as the normal storage location for magnetic tapes containing classified information; the ABC M-4 File Destroyers for use in classified files, located in separate compartments throughout the ship and the MIA2 and M2A1 cryptographic equipment destroyers.

With slight variation, the TRSs were equipped with the "VALDEZ Quick-Fix" type system for equipment/document destruction and scuttling:

"The USNS VALDEZ has on board devices to scuttle the ship and to destruct electronic devices and documents. An electric ignition and firing method has been provided...The scuttle devices are 14 square shaped explosive charges which will cause a total of

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14 approximately 18" square hull penetrations below the waterline in 3 compartments...The file destruct are standard stock items (sodium nitrate) (M-4)... The electronic equipment destruct devices are standard stock items (thermit) (M1A2). The document and circuit board destroyers are standard stock items (sodium nitrate or sodium tricalcium nitrate) (M-3). NWC China Lake devised and installed a method to electrically ignite file and electronic destruct devices from a central point within the research spaces, scuttle charges are fired from outside the research spaces.. Scuttle firing and destruct ignition are installed separately by standard mine safety appliance blasting units. These are battery powered and independent of ship's power." (34)

The destruct devices were repeatedly tested for effectiveness. The system was never proven totally satisfactory regarding the 30 minute goal set for destruction; however, it was determined that if allowed to fire, after 30 minutes, the process of conflagration would be too great to reverse.

Prior to the deactivation of the TRSs, no incident occurred that warranted the use of these devices so to date the system has never been tested under actual conditions.

(34) COMSTSLANT 031818Z February 1969, "Scuttle and Destruct Report on Interim Installation."

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AGING HULLS

Repetitive mechanical failure was a problem common to all the Technical Research Ships. The original TRS program called for retirement of the first ships as it advanced towards that time when TRSs were newly constructed from the ground up, but, when the time came to retire the USNS VALDEZ in 1964, the program had reached a point where funds were not available for new construction and strong justification for such on-going construction was required.

Funds and justification for further ships were never approved so the original 6 ships represented the total resources of the TRS program until its conclusion. (The VICOTRY ships LIBERTY/BELMONT had a life expectancy of 10 years beyond 1967; the Liberty ships OXFORD/GEORGETOWN/JAMESTOWN had a life expectancy of 5 years beyond 1967).

Though yearly overhauls and periodic upkeep was the standard operating procedure, the vessels and installed equipment suffered numerous casualties that can be blamed primarily on "old age" factors and the problems involved with installation of sensitive electronic equipment on a vessel not constructed originally for that purpose. For example: the USS GEORGETOWN suffered a boiler casualty off Venezuela on 25 March 1967 which required 15 days in port for repairs; lost pump engine 14 December 1967 while enroute to the Mediterranean on a quick reaction mission; suffered a generator outage 1 - 26 May 1968; main engine disablement 27 May - 06 June 1968; failure of a fuel injection system in August 1968; lost SA-01 position due to a hydraulic pump failure 14 - 25 August 1968; experienced boiler steam main damage 13 - 15 November 1969; and had a crank shaft damaged beyond repair December 1968 - 18 January 1969. The USNS MULLER lost two generators 11 - 29 July 1969; suffered a main engine failure 23 March - 05 April 1966 which required the ship to be towed to safety; lost DCGB-04 position due to a short in the equipment with no spare parts available on board 21 December - 29 December 1968; and lost a diesel generator 12 June 1969.

The problem can best be summed up by a statement from CINCLANT concerning the delay of GEORGETOWN's last proposed deployment:

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"The extent of GEORGETOWN's engineering problem.... cannot be determined for several days because of lack of information on availability of parts for an ancient power plant which has been out of production for many years." (35)

With every material casualty the reliability of a vessel decreased and as the days off station for repairs increased the productivity of the SIGINT detachment decreased. At a time when TRSS were being looked to as resources for quick reaction and shadowing missions, many were approaching retirement and unable to satisfy these requirements.

(35) CINCLANT 051640Z July 1969, "USS GEORGETOWN Deployment Recommendation".

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SECTION 6

DEACTIVATION OF TECHNICAL RESEARCH SHIPS

In July 1969, OSD because of budgetary limitations, proposed a reduction to each DOD department's Cryptologic Program. Each department was asked to submit a plan based on a 5% and 10% proposed reduction to indicate from where the cuts would come.

CNO subsequently advised DIRNSA of those Cryptologic programs considered most expendable and proposed the immediate inactivation of the USNS VALDEZ and USNS MULLER, "...in view of the high cost and difficulty in protecting these platforms and due to the fact that the program does not provide sufficient resources for adequate upgrading." (35)

On 18 July, DIRNSA forwarded to DEPSECDEF, the program adjustments for FY70 based on a 5% and 10% reduction in funds. With the 10% reduction, NSA proposed to retain only 2 ships for deployment in SEA waters and one for deployment off Cuba, with a possibility of other deployments in the future if priorities change. (37)

The first indication of Navy's actual deactivation move came in August when CNO, because of reduction in operating funds, initiated some preliminary ship movements prior to the final disposition determination by DEPSEC. The AGTRs were placed on the Navy's 703 list-- the names of the ships to be inactivated as a result of budget cuts and the USS GEORGETOWN, undergoing upkeep prior to relief of the MULLER, was ordered to remain in port until further notice.

As a result, CNO advised COMSTS that obligation to cover the operations of the VALDEZ and MULLER would be withheld effective 1969.

Estimating that 60 days would be necessary to strip the equipment, obtain disposition directions and prepare the ships for lay up, COMSTSLANT recommended that CNO direct the VALDEZ, then operating off the west coast of Africa, be returned to CONUS immediately for deactivation.

On 22 August, CNO directed CINCLANT to return the VALDEZ and indicated the MULLER would continue operating off Cuba until early September before deactivation. (38)

(36) CNO 092141Z July 1969, "Program Adjustments, FY70".

(37) DIRNSA, ser: N0748, dtd 18 July 69, "Program Adjustments".

(38) CNO 222054Z August 1969, "Deactivation of USNS VALDEZ and MULLER."

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Shortly thereafter, DIRNSA, concerned with the potential loss of shipborne capability, forwarded a message to CNO expressing reaction to the moves taken by that office to deactivate the ships. These actions were neither coordinated with NSA nor reported to NSA until after the fact.

"We view AGTR/TAG resources as critical to our overall collection capability. Recently we expressed alternative recommendations to SECDEF. These included reduction in Seaborne SIGINT operations if the 10% cuts were to be ordered. To date we have received no definite decision on the alternatives selected.... It is clear the TRS program is vital to us at this time for sustaining SIGINT operations against Cuba, Southeast Asia and Mediterranean targets at a minimum." (39)

In view of the possible deactivation of the TRSs, DIA requested comments from the CINCs regarding their position on this matter. CINCLANT recommended retention of one or more of the TRSs for use in contingency support role. CINCPAC recommended retention of the two TRSs in Southeast Asia because of their "vital role in supporting current and future allied operations." Stating that he could not address national tasking of the AGTRs, USCINCEUR advised that his requirements for surface tactical reconnaissance could best be satisfied by other means.

JCS then advised OSD (DDR&E) that the military requirement to retain three AGTRs as previously suggested by NSA was not of sufficiently high priority to warrant the removal of the AGTRs from the Navy 703 List. NSA in a reclama message, again stressed

"...the minimum requirement is three AGTRs-one ship targeted against Cuba, one or two ships in SEA and one ship for the Mediterranean as long as Soviet naval activity remains at a high level... If the Navy 703 list is accepted, the remaining assets will consist of only direct support detachments afloat... These detachments possess an extremely limited COMINT capability and are designed for support to the local commander." (40)

(39) DIR-127, 252114Z August 1969, "Seaborne SIGINT Collection Platforms."

(40) DIR-136, 121246Z SEP 69, "Deactivation of Technical Research Ships."

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By mid-September, Deputy Secretary of Defense had not yet made a final decision concerning the disposition of the TRSs. In the mean while, CNO proceeded with deactivation planning. The USNS VALDEZ was ordered home and arrived in Norfolk on 18 September to commence deactivation and the MULLER departed station 7 October and proceeded from Port Everglades to Norfolk to arrive 16 October.

On 01 October, Deputy Secretary of Defense Packard concluded that "retention of the 4 AGTRs in the active fleet is not required to satisfy national intelligence or military requirements." (4I)

In the interim, NSA and DIA had completed and forwarded to JCS a memorandum containing the impact on the intelligence community which would result from a decision to deactivate the MULLER.

The study had been concluded apparently with out knowledge of the DEPSEC's final decision on 01 October to deactivate the MULLER. In view of his decision, no further action on the report was considered necessary. The first enclosure to the memo was however, forwarded to DEPSEC as additional information relating to the deactivation of the USNS MULLER.

Once the decision on final disposition was firm, schedules and guidelines for deactivation were formulated for each vessel.

The USNS VALDEZ arrived in Norfolk 18 Septmeber 1969. The USNS MULLER arrived in Norfolk on 16 October and completed deactivation on 28 October 1969..

The USS GEORGETOWN, in port Norfolk since 7 MAR 1969 completed deactivation on 19 December 1969..

The USS OXFORD and JAMESTOWN commenced deactivation in Yokosuka, Japan on 4 November. Since these two ships were stricken from the Navy ledger, and the ships were to be stripped for resale no formal deactivation notices were forwarded.

The USS BELMONT the last to commence stripping, completed deactivation in January 1970..

(4I) DEPSECDEF Memo 920425 dtd 01 October 1969, "Inactivation of Intelligence Ships."

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