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Possible document titles:

"An American Boffin."

"An American Boffin in WWII."

"An American Boffin in World War II."

"Adventures of an American Boffin."

"Adventures of an American Boffin in WWII."

"Adventures of an American Boffin in World War II."

"Where Away?"

"High Seas Adventure."

"Fleet Post Office, San Francisco."

"Fleet Post Office, San Francisco, WWII."

"Fleet Post Office, San Francisco."  
World War II

"F.P.O. San Francisco."

"F.P.O. San Francisco, WWII."

"F.P.O. San Francisco."  
World War II.

"c/o Staff ComDesPac,

"c/o Staff ComDesPac, WWIL."

"c/o Staff ComDesPac." World War II.

"c/o Staff ComDesPac."  
World War II.

"c/o Staff ComDesPac, F.P.O. San Francisco."

"c/o Staff ComDesPac, F.P.O. San Francisco, WWIL."

"c/o Staff ComDesPac, F.P.O. San Francisco, World War II."

"c/o Staff ComDesPac, F.P.O. San Francisco."  
World War II.

"c/o Staff ComDesPac, Fleet Post Office, San Francisco."

"c/o Staff ComDesPac, Fleet Post Office, San Francisco, WWIL."

"c/o Staff ComDesPac, Fleet Post Office, San Francisco, World War II."

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World War II.

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"c/o F.P.O. San Francisco."

"c/o Fleet Post Office San Francisco, WWIL."

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"c/o Fleet Post Office San Francisco."  
World War II.

"c/o F.P.O. San Francisco, WWII."

"c/o F.P.O. San Francisco."  
World War II.



Pearl Harbor, Notes.

840602

431100-

**ComDesPac:** Located on **KuaHua Island** across from the wreck of the Arizona and the California (?), which was still visible. Building was evidently an old dockside warehouse hastily made into offices, etc.. Convenient, as DDs could tie up alongside the headquarters office. **Navy Yard Bus** excellent transportation & very frequent service, frequently quite dusty! Bus also went up to **CinCPac** area & Naval intelligence, **JICPOA** (Joint Intelligence Center, Pacific Operational Area). **Lt. B.K. Couper** office in Cincpac area offices-Sonar ...especially **"BT"Records**. Cdr. Sims; JS to Couper- - "Get him off our backs!". DD skippers simply couldnt be bothered with taking BTs when being bombed & strafed and under compulsion to defend themselves...question of priorities & taking BTs simply was'nt very high on the list! Couper had been on the **Cruiser Louisville** (??) when it made a high speed run in close to Japan to obtain critically needed BT data for sound velocity for the use of U.S. submarines (Before Sub mounted BTs were available....Couper took the BTs!

**Lt. Lott:** Incharge training in Ship Handling for ComDesPac. facilities located at the ASW training center at the sub base.

**West Virginia Mast:** (We V) Removed from sunken BB and set up at PH for use as signal tower.

**SS Haddo: Lt.Cdr. John Corbus, Captain.** Cdr. Sims wanted JS to get submariner's view. arranged for "indoctrination" on a shakedown run of the Haddo after finishing overhaul at PH. Also on board: **"Prospective Commanding officers"**, **Cdr. Chester W. Nimitz, Jr., Cdr. F.....**(Later Comander U.S.N. Research Lab, D.C.). Also aboard Capt. Peacher. General apprehension to first SS trip, especially since would be diving in water over a mile deep. Logic: any water deeper than a few hundred feet would make no difference! It just "seemed" to make a lot of difference. SS full of officers, JS directed to sleep on bunk (folded up normally) in the officer's wardroom. Therefore had to wait to go to bed until all officers had left the wardroom for the night. Dinner quite an experience. About sunset all the white lights below deck were turned off and **red lights** were turned on. **Dark adaptation:** problem; **Food looked very unappetizing!!** peas = black

**ASW Training:** Destroyer facility located at the sub base beside a dock. OINC; Lt. Cdr. Barnes. Somewhat over weight. Genuine "southerner" from New Orleans, LA. Cigar smoking, used as kind of wand in gesturing while speaking. Claimed that there was only one real drink, specifically branch water & burbon!

**BuShips Field Eng.** 430300?? Showed up at PH probably about the time JS returned to PH after mainland visit on return from SoPac, and while JS was still living at the Moana Hotel. Very fine group of men under H. H. (Hal) Baker. Others were: J.M. (John) Aitchison, [Sonar Div., Columbia Univ. Div. of War Research], E.A. (Eric) Blomquist also formerly with Div. of War Research of Columbia Univ. JS Flew with at Lakehurst NAS. blimps, instructed Blomquist on his first blimp flight in the use of the MAD ASW equipment, W.H. (Bill) Fritz, F.E. Gilbert, W.A. Henderson, Guy S. Harris, Victor Harris, H.B. (Hal) Haught, R.C. Orr, Jr., Woodman Perine, R.N. Shilling, Dave M. Sherwood, Mel R. Sproul, R.B. Stewart, R.L. Whannel, W.C. Whitman, Jerry A. Beranek and others not mentioned. Hard working group and very helpful. The management of the Moana Hotel was greatly irritated by myself and especially by the BuShips Field Engineering group since we persisted in ignoring the requirement that guests could only stay for 5 days. Honolulu during the war simply didn't have enough rooms for all of those who needed or wanted rooms. I felt very uneasy about this and discussed the problem with Cdr. Sims. However there was little he could do since there was no space for civilians like myself in the tremendously crowded BOQs of the navy. He did say that ComDesPac was trying to work out an arrangement to move to Pearl City on East Loch of the PH area, and that if this were done there probably would be quarters that I could occupy at that location.

**Hollywood.**

**Hotels:**The wartime regulations limiting length of stay were still in effect. 5 days was the maximum continuous length of stay permitted. The solution to this problem, if one had to stay in the area for several weeks, was to scurry about the Hollywood and Los Angeles area making advance reservations. Some of the hotels would not accept reservations by telephone and required that the reservations be made in person. This added substantially to the difficulties of the time. It was also essential to select hotels that were near good bus or trolley transportation. Not only good but practical, since it was simply not feasible to require that a large amount of time be spent getting back and forth. In spite of the large number of hotels in the Los Angeles area there were times when it was very difficult to find an acceptable hotel. The Hollywood Plaza and the----- Hotel, as well as the Hollywood Roosevelt, were all within a block of the Navy Photo offices in the XXXXXX building at the very well known corner of Hollywood and Vine. another limitation in the selection of a suitable hotel was the per diem limitation on hotel rates reimbursable by the Univ. of Calif. business office. Of all the "suitable" hotels my favorite was the Los Angeles Biltmore on South Olive street. Not only were the rooms excellent, but it had a very fine coffee shop with, for my rather limited means, the best food in the Los Angeles area. Transportation to Hollywood was easy, since the trolley terminal was just across the street, and I could get a car direct to the corner of Hollywood and Vine with fast good service.

**U.S. Navy Photo Service:** The administrative offices were located in the XXXXXX Building. The only offices that I came in contact with were on the 7th (?) floor. Production offices were located throughout Hollywood. The production office I spent the most time in was located only a block away and on Vine street. The Offices, prewar, had been an automotive sales and service facility with large show rooms on Vine street, with extensive service facilities in the rear. When the navy took over, the showroom was cutup into many small offices with eight foot partitions. Since the ceiling was quite high this left good ventilation. The resulting large wall area was a great advantage for movie production since the illustrated story boards were easily displayed on the walls. It was in one of these offices where I spent most of the time necessary to get the movie scripts written.

**Hollywood**



**Restaurants:** Food was easy to find in Los Angeles and Hollywood, but good food at a reasonable price was quite another matter! I mentioned earlier the coffee shop at the Biltmore Hotel in Los Angeles. In Hollywood there was the Ivar House on Vine street, quite near the corner of Hollywood and Vine.

**Hollywood**

**Treasure Island, San Francisco**

**Notes.**

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440000. Visit the Under Way Training Command. SASAT etc.. After reporting in, the LT. in charge told his yeoman to rush me through the ID procedures ( ID card with picture etc.). Ramos, the yeoman, turned out to be rather aggressive, and it seems that he knew the photographer who was taking the ID photos. After we arrived at the ID office, Ramos stepped over to the photographer, and the next thing I knew, I was whisked ahead of the line of individuals waiting to be photographed. I was photographed immediately, and Ramos suggested that we should wait a few minutes for the picture. The photographer disappeared and was gone for quite a while—at least long enough that I noticed that those waiting in line were showing a fair amount of impatience. In due time the photographer reappeared with my laminated photo and ID card. We left quite quickly. Ramos made some joking remark to the effect that he had been ordered to get me through the ID process as quickly as possible and he sure had!!

The next day I learned just what Ramos had been up to the day before. It seems that what he had done had created quite a to-do, which had come to the attention of the commanding officer. Ramos had told the photographer to rush me through since I was on a hush hush urgent program. This had put me ahead of a group of FBI and Secret Service men who were waiting in line when I had arrived for a picture. Ramos didn't seem to be the least bit sorry, and it was quite evident that he had enjoyed the entire episode.

**Espiritu Santo. NOTES.**

431208-440317.

**Left PH 431208 on the Hutchins DD476**(P119 U.S. Destroyers), Capt. E.W. Herron, for "Cocoanut College" via Funafuti (431213) (Formerly held by the Japanese.) Commodore K.M. Mc Manes on board as passenger. (See P268 "DESTROYER).

**Checking out** of the Moana hotel, etc.

**"Crossing the Line"** ceremony, crawling thru canvas tunnel filled with garbage, being paddled while trying to crawl (slippery), **Mc Manes** was'nt required to do this. Climbing over cargo net rigged as obstacle 10 ft. high? while being sprayed with high pressure streams of water from two fire hoses. (Probably impossible to have climbed over if those directing the hoses didn't relent at least a little bit, kissing "The baby's" grease covered stomach,(fireman from engine room gang). Fortunately I was loaned the clothing which I wore - - - my own would have been ruined! Now a "SHELLBACK!" (Neither longitude nor date affixed to card... simply good security precaution.) Was able to plead successfully to not have my hair cut in usually grotesque fashion since I explained that I was to report to the Commander South Pacific (Gen. Mc Arthur's command) and the haircut probably would'nt be appreciated.

**DD division:** Hutchins, Claxton, Dyson ++? Steamed along at usually 27k. Needed for a comming operation. At this speed needed to stop for fuel oil at **Funafuti** which had rather recently been retaken from the Japanese. fuelled late in the day from a tanker anchored in the lagoon.

**Long hours...**General Quarters early every morning and evening with heavy, and often dirty, life jacket and the mandatory steel helmet.

**At Espiritu Santo** reported in to REPCOMDESPAC **Capt. William M. Cole** on the destroyer tender **DIXIE**.

**"Black Cat"** **PBY** patrol squadron across anchorage. **Winfield Fromm** from AIL attached to help training...JMS visit during heavy rain. **PBY** crash on takeoff!! JMS to coxswain as we tied up at "Cocoanut College" dock; "This will be something to watch!" Engines started to roar on dangerous down wind takeoff! Porpoised twice

**Espiritu Santo, Notes.**

& crashed! Explosion heard...silence. Coxswain stood frozen by sight. Yelled at to get in boat & get going. Others arrived first. lifting motormechanic (body) out of "tower". Closer: Torpedo seen to be running in circles (Acoustic homing torpedo carried under wing & broken free.) Tug boat "boiling up" to rescue, sighted torpedo & backed down emergency astern! All crew killed.

Before leaving PH **Cdr. Sims warned, "Not to go up the Slot."** Capt Cole persisted...seemed the better thing to do. Part of the "Little Beaver" squadron arrived, JS given orders (Cole) to board the **Charles. Ausburn, DD570, Capt. Arlie Burke's** flag ship. Two Australian cruisers picked up during night. GQ next morning, JS on bridge, glassy rolling sea, N.G. way sonar operating, i.e. max TVG (Time Variable Gain). expressed concern to Sonar officer..." only interested in torpedoes." J.S. = NG. Sonar officer left & returned said, "Capt. Burke wants to see you on the bridge wing." Good questions...Who JS was etc. JS answered and explained. Then & there Burke gave orders to change the way the sonar was being operated.

**Florida Island, Tulagi, (Savo Island)** "Iron Bottom Bay (Sound)", anchored. boat to destroyer tender **Whitney** (oldest or next to the oldest DD tender)...sister ship of the **Dobbin** JS on at Casco Bay. Several battle destroyed DDs visible. **Lt. ST. George** Electronics material officer. Bunked with St. George, very very hot, sweat all night! Movies at night on deck. St Geoge story of Raytheon Company tech. rep. impatient with USN supply system, wrote to eng. friend back at Raytheon plant about **lack of spares**, etc. Only days later big USN sea plane landed alongside loaded with needed spares. Problem: Raytheon rep. asked by navy brass to be reassigned for having "gone over heads & not having gone thru channels!" General problems: seemed related to lack of priorities. i.e. toilet paper same priority as Radar magnetrons...anyway this is what I heard. Destroyers with no magnetrons therefor Radar inoperable whereas cruisers in the same anchorage might have 5 to 9 spares. Solution: **Trading**; The senior noncommissioned officers chiefs or warrant officers from the destroyers visit cruisers and work out trades...usually return with enough magnetrons to get the DD Radars up and running plus a spare.

**Return to Espiritu Santo:** Rain- Rain...taken over to USN **tanker Kankakee (AO 62)**. Met as came on deck by Capt. Raines. Looked over carefully then told could bunk in captains quarters since he would be on bridge all the time and sleep in his sea cabin. However, we would eat together in his quarters. Laundry (JS) drying all over. At dinner the first evening, Capt. Raines told of problem with operating the 5 inch gun...overheating of electric generator in the engine room. Capt. had read my orders and noted that I had been doing some electrical

**Espiritu Santo, Notes.**

work...would I please take a look at the problem and see if I could fix the problem. Good stimulus to get job done as we were proceeding unescorted thru submarine waters and the gun was our sole anti-submarine defense. Steam turbine driven elect generator mounted on an open grill work platform high up on the port side of the ship's engine room...the hottest place in the engine room! Found the air intake for the generator cooling to be at the level of the grill work platform. Hatchway (door) to passageway in "officer's country" not far away. Asked the ship's engineering officer for a length of the large canvas ducting used on tankers to ventilate the tanks when in port. JS proceeded to connect the generator cooling air intake with the adjacent passageway using the length of flexible canvas ducting. Generator started and immediately began to cool off as it drew air from the passageway. Officers were very happy since they now had good air flow through their previously unvented staterooms!

Heavy rain, tanker to Dixie & Capt. Cole. Reported on trip. back to Aore Island.

After initial arrival on Aore Island, Assigned to quarters occupied by the officer training staff. "Dean" of "Cocoanut College" Officer in charge; Cdr.W.H.(?) Wylie (lived on Dixie). Officer in charge ASW training unit; Lt. Jones. Assistants; Lt. Adams (Chicago, banking or brokerage) & Lt. Valentine (Val), highschool teacher, english? Val played a clarinet. Habermill, Elect. 1st Class was in charge of maintenance of ASW equipment. ASW attack teacher was the standard Sangamo Co. equipment that was in the ASW Training Center at San Diego as well as at the USN Submarine Base at PH. (Controlled by COMDESPAC but located at the sub base.) Movies at night in the open under the cocoanut trees. If raining all would wear raingear and the movie ran as usual. All of "Cocoanut College" located in a very large cocoanut plantation (prewar cultivated). narrow unimproved paths (single file only) connected the various function areas. Day & night every so often I could hear cocoanuts going "Klunk" as they dropped from the high palm trees to the ground, frequently hitting the paths. I worried about getting hit, but never heard of anyone being hit! Sure, I often heard the cocanut as it let go from it's cluster and started to drop, but then I had the opportunity to take evasive action if necessary. After P.M. work over: Quanset hut to relax. Val often played relaxed, mournful, mostly unrecognizable melodies on his clarinet. Others, absentmindedly listening or talking. always sipping cool drinks (ice readily available). Southern Comfort + pineapple juice = favorite (greatly frowned upon in more civilized areas, but then this was as civilized as we could get!).

**ATTACK TEACHER REPAIR:** This was the job I had been sent to do. Habermill was very intelligent and readily explained what the equipment failures had been. The main power dynamotor had failed as well as some of the synchros in the attack teacher itself. Problem: Equip. in open ended quanset huts, the continual very high temperature & humidity both day and night. This combined with the cooling of the equipment at night when it was turned off caused moisture condensation with electrolysis and corrosion. When powered up in the morning the electrolysis proceeded very rapidly until the equipment warmed up. After a few days there were inevitable electric breakdowns. Working with Habermill we placed electric light bulbs inside the attack teacher equipment and up against the dynamotor (located outside, on the "back porch") The light bulbs were turned off when the equipment was energized & operating, but they were turned on at night, or at any time the equipment was not energized.

**Lt. Jones burned pants:** Due to very high humidity and consequent mildewing of nearly everything that could mildew, most officers had placed electric light bulbs in their personal clothes lockers. the lights were left on 24 hours a day. Since heat rises most of the light bulbs were placed inside and on the bottom of the lockers. One day while I was in residence, Lt. Jones received orders for his transfer. He seemed to be very happy with the duty station. All went well until packing up. His dress blues (not to be worn in the tropics) were kept in his locker and when he went to get his uniform he found that the pants had fallen off the hanger and on top of the light bulb. Unfortunately a very large hole had been burned in the seat and there simply was not time enough to get them repaired on the tender before he was scheduled to leave. His next duty station would require that he report in blues (Winter & in the north!)

**Training Sub:** One of the old "S" boats (SS32 ??) was assigned to work with the ASW training group for underway training. The sub. was of the old single hull type and had no air conditioning. The routine called for the sub to spend the day submerged at periscope depth and maneuvering for a realistic attack situation for the surface craft (usually DD for ASW refresher training). When the training was over, late in the day, the sub would surface and make the run back to it's anchorage, if possible alongside a DD ... often the same one it had been working with during the day. Alongside the DD for the best of reasons!! The DD had fresh water showers and perhaps more important ice-cream, neither of which was available on the sub. It was very hot and humid all day long on the sub while running submerged and the crew looked forward to showers & ice-cream onboard the DD. Unfortunately some of the DD skippers objected that this practice was using up

too much of their fresh water and their ice-cream! Some commanding officers even went to the extent of complaining to COMDESPAC. Fortunately, the result was a prompt negation of their request, and further suggested that the sub personnel should be welcomed!

**Laundry drying:** During wet weather, base personnel dried their laundry in a large heated quanset hut. clotheslines were strung throughout the interior. Very hot & humid!

**Very large cockroach** in JS bed. Ubiquitous mosquito nets essential as well as the equally ubiquitous aerosol "**Bug bombs.**" JS good leather luggage did not mildew... Wannamaker's best, bought very early during the war on one of my visits to Philadelphia.(To talk with Leslie Chambers of **luminescence chemicals...**re Langley Field tel. conversion with Dr. Irving Langmuir of Gen. Elect.)

**Chief Warrant Elect. Mr. Vincent:** (Vallejo, Calif. area.) Arrived at "Cocoanut College" from COMSESPAC. Apparently sent by Cdr. Sims, after a couple weeks, to checkup on how I was getting along. After showing Vincent what I had done —he was all smiles. I Felt that I had done very fine by his evaluation. This was confirmed in later contacts. We got along very smoothly.

The carrier **Bunker Hill** arrived for very brief stay. Saw much later limping into PH after beeing heavily damaged later in the war. (Kamikaze, etc. in "Operation Iceberg" June 1945. P500 Destroyer.)

**Water spouts:** On the way to Espiritu Santo, late in the afternoon, partially tword the sunset as many as 7 waterspouts were seen—several directly in front of us. Considered to be "no big deal". Exciting to be on deck & as far foward as possible...looking aft at the guns and the surprisingly delicate appearing superstructure from the **visual perspective** of the forward position. (see Hutchins DD 476 P119 "U.S. Destroyer".

**Bunking arrangements:** Hutchins, JS top bunk of a 3 tier rack in cabin with 5 officers (two 3 tier bunks) "officer's country"(One deck below main deck & below handling room for #2 5 inch gun. ["U.S. Destroyer" P116] behind handling room for #1 5 inch gun which was aft of CPO mess). Rain sloping below deck thru open deck hatch behind #1 gun mount. Fortunately, well shaded reading light on bulkhead at head end of bunk. Fair library on board.

**"Washing machine Charlie":** Heard referred to but JS never heard. Ref. to infrequent flyover of Japanese observation plane when Japan still had bases within plane range. NATS. Naval Air Transport Service, on main island of Espiritu Santo directly across from "Cocoanut College" on Aore Island. Quanset hut "office" with a tent Barracks for the transients. If one's departing flight was early in the morning it was mandatory to stay in the barracks. JS did so on 440318 for departure to PH. Met Lt. (Boston, MA., Curator of the Boston Museum of Fine Arts) who was in charge of the NATS operation at Noumea.

**SCAT. South Pacific Combat Air Transport.** JS took from U.S. Marine air base in Noumea to Plaines des Gaiacs at the northern end of New Caledonia for the flight (NATS) to Brisbane, Aus.

P. T. RATHERNE SPI  
BATHING ?



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**Pearl City Notes.**

**"Handy Billy":** Portable gasoline driven centrifugal emergency pump for fire hoses. When needed to get surface water temperature for Sonar predictions, etc., JS suggested lowering handy billy intake pipe over the side with bottom end toward the bow...then when underway at 18 knots+ the water would simply flow out of the top of the pipe where the temperature could be easily taken. CincPac had requested all DDs take routine surface temperatures and the cooling water intake was too low in the hull to give a surface temperature, and taking a BT was too much of a nuisance. Idea tested at sea and worked very successfully! Orders then went out to all DDs to use this method.

**IX 100:** (Lt. Corbin, OinC.) Ex sub chaser with engines removed and several full sized shipboard sonars installed for training and instruction purposes. Also equipped with TBS radio to communicate with DDs & DEs anchored in PH. i.e. Com Des Pac tech. personnel, including JS, could call for a boat etc. when needed to get about. Lts.: **A.A. "Al" Mabson; H.A. "Hal" Corbin; F.M. "Mac" Carlisle** in the Logistics section of ComDesPac "ran" the program under **Cdr. J.H. Mc Quilkin**, Material Officer. Operationally, at PH, this was the group of officers that JS was most closely associated since their assignment covered sonar. JS also saw considerable of **Lt. A.A. "Al" Lang**, Asst. Material officer, Electronics, and **Lt.(Jg) W.E. "Bill" Vore**, Electronics Assist.(Radar). Lang sent to Japan after armistice to get a look at Japanese electronics in DDs & subs. Vore, Sent as special RADAR officer for DDs in large attack force, to be sure the DDs RADARs were working at their best. maintenance was a problem! He was so tired that he simply lay down on the deck behind the RADAR equipment and went to sleep!!

**JS Trouble Shooting on "flooded" sonar heads (DD, DE?)** . DD arrived at PH with head that had burned out between the Panama Canal & PH. New head installed at PH, and DD out for shakedown and operational training, including ASW. After two days radio message recd. to the effect that the sonar had again failed! The admiral (Ainsworth?) very unhappy. said that the DD simply had to be operational and available!! soon as DD returned to PH, Mabson & Carlisle went out to see what was problem. Later JS got a call to go out to the DD and see what they had found. Reported to the lower sound room where they had removed the sonar head and had it opened up on deck. They pointed to a pool of water inside, and implied that there had been a leak...so , no problem but to replace the head.

Mabson stated new head was being picked up at Naval Supply Depot...only one

head was in stock! JS being eternally skeptical, put a finger in the murky discolored water and tasted it. **It was not salt water!!!** It tasted horribly, varnish, insulation etc. There was universal disbelief at my statement. Then they all took courage dipped a finger and tasted...agreed that it though it tasted of many things it definitely wasn't salty! Analytically this posed a problem! The ship had definitely not been in fresh water, but there was water in the head—a priori evidence of a leak! On questioning the ship's sonar officer I learned that the ship had 3 previous sonar heads replaced!!! during shakedown on the East Coast, and the last at Panama. Too high a failure rate for a random problem. Suspected a manufacturing error, such as the heads not having been baked out before being charged with anhydrous nitrogen. If this were the case: the polarizing current in the magnetic coils would have heated them up driving out the moisture where it condensed on the relatively cool inside surface of the head cooled by sea water. Then it ran down the inside face and collected in a pool at the bottom of the head. Next, if the ship was then in rough seas the water could be splashed up over the magnetic coils near the bottom of the head. Then since the DC polarizing voltage was on the coils they would quickly short out and fail. Again, on questioning the ship's sonar officer I was able to confirm that **each time the previous heads burned out the ship was in rough water!!!** This seemed to confirm the hypothesis relating to the failure of the mfr. to bake out the heads. I suggested to Lt. Carlisle that he obtain the mfr. name and serial numbers of all the failed sonar heads involved, including the new head to come from naval supply at PH. This info. was then sent in an urgent dispatch to The U.S.N. Bureau of Ships at Washington, D.C. for a check with mfg. for possible baking failure.

In the meantime the new head arrived from Naval Supply and we prepared to make its' installation. I suggested that it should be checked for having been baked before going ahead with the installation. The Question was; How to check the head?? Measuring resistance to ground not adequate since coils were installed over insulating sleeves and would give a good reading whether baked or unbaked. Solution: Measure the moisture in the pressurized nitrogen. But, how to do this without any instruments?? This was a familiar dilemma when trying to solve problems under wartime limitations. Any practical solution depends upon resorting to basics. Need a simple means of venting the pressurized nitrogen, exposing nitrogen to very cold surface to observe any condensation. Implements: Used pickle bottle and ice cubes from ship's galley, rubber tubing from the dispensary, bucket from

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bosn's mate. To use: The clean dry pickle bottle was cooled thoroughly in the bucket of ice water, the rubber tube connected to the nitrogen filling fitting on the sonar head. Then a small amount of nitrogen was released to purge the tube of any moist air. Then the rubber tube was inserted deep into the cold bottle and a slow flow of nitrogen released. Promptly the gas showed a heavy moisture content as nearly instant condensation on bottle wall occurred.

**Baking out head:** Obviously no point in installing a clearly unbaked head. Problem: No other sonar head available since we had the last one in Naval Supply. It would take too long to bake out the head in the Naval shops or on a Destroyer Tender. Solution: vent all the wet nitrogen, put a vacuum pump on the head and pump all night with the head's polarizing current on. The polarizing current would get the coils quite hot, especially, if the head was not in the water. The head could then be flushed with anhydrous nitrogen and sealed normally under pressure from a high pressure tank of gas. A vacuum pump was available so the pumping was started and someone sent off in a Jeep to get the tank of anhydrous nitrogen from the Naval supply depot. As planned the pumping was terminated in the morning after pumping all night, and the fresh anhydrous nitrogen vented into the vacuum of the head. After waiting a suitable length of time the nitrogen was again vented into the ice cold pickle bottle. There was no condensation! So the gas was dry! the remaining nitrogen was pumped out and the head refilled, and pressurized. The sonar head was installed. Nothing further was heard from the DD for the remainder of the war, so the job must have been O.K.

**BuShips Message:** Later in the day a reply to our urgent message sent to the Bureau of Ships was received. **All of the heads we had inquired about were found to have been in the same batch from the factory and had been processed without baking!!!**

**Laundry:** The ship service(?) laundry at the destroyer base, at least as far as the officers were concerned, was a very good laundry. It was run on a weekly cycle so that no more than a weeks dirty laundry accumulated. My number was 220. I found it easy to remember, since 220 volts is one of the standard industrial & domestic ac voltages. Lt. Bill Vore's laundry number was 180. I found this easy to remember since it was one of the cardinal points of the compass.

(After return to Pearl Harbor—moved to Pearl City). **FXR Gear:** referred to as "Foxyer Gear". ASW equipment for towing behind ships (destroyers) to negate acoustic homing torpedoes. The ships screws were the dominant sound source and were, therefore, the target for the acoustic homing torpedoes. This was a major problem in the Battle of the Atlantic where the Germans were using the acoustic torpedo. However, we had no evidence that the Japanese had acoustic torpedoes, or were planning to use them.

**Pearl City Notes.**

CNO or CINCPAC decided that we should start towing the FXR gear behind our destroyers. COMDESPAC, and Pacific area destroyer men were a rather independent lot and COMDESPAC decided to first try out the FXR gear before issuing orders for its' use. Cdr. Sims decided to have me check out the FXR equipment. A destroyer was assigned, and I arranged to have a submarine assigned to do the acoustic monitoring with a BU Ships engineer on board the submarine. One of the Chief Mac Donald from the COMDESPAC ASW training group was assigned to go with me and take charge of the deployment of the FXR gear. The FXR gear consisted of three parts; towing pendant, depressor, and the noise generating bars. The general theory was to tow the noise makers sufficiently far behind the ship so that if an acoustic homing torpedo were fired at the destroyer it would be distracted, or decoyed away from the screws. If it hit the noise maker it would be too far away to do any damage to the ship. The noise makers consisted of two steel bars rigged side by side to tow with their long axis at right angles to the direction of motion. In this position the hydrodynamic forces generated when underway, would cause the bars to oscillate rapidly back and forth so that they hit each other very hard and made a loud noise at each impact. The line towing the steel bars was secured to the towing pendant just at the point where it was secured to the depressor. It should be obvious that for the FXR to be successful that it would have to make a noise many times louder than the ships screws.

As usual on the day assigned (440814) for the test I had to get up very early as the DE 262, the Canfield, which was to be used for the tests was scheduled to get underway at 0600. It was necessary to drive a jeep from the Destroyer Base at Pearl City to the COMDESPAC ASW training center to meet the chief and pick up the FXR gear. The chief had arranged for a boat to pick us up with the gear along side the dock. We had help loading the equipment into the boat, and got underway to the destroyer at one of the mooring buoys.

As soon as we got on board the DE got underway and headed out to sea where we were to rendezvous with the SS318, the submarine Baya, which was to monitor our operation. On board the Baya were BU SHIPS field engineers with acoustic measuring equipment so that we could make precise measurements of the FXR noise output.

**Staff Personnel:** Assistants to Cdr. Gelser Sims (ASW); (followed by Cdr. E.M. Brown, Cdr. R.W. Curtis) Lt. Lloyd N. Case (later Lt. Cdr. from Oakland CA. Wife physician, Dr. Case, at Oakland Hospital), Lt. Jack Dorsey, from Cleveland Ohio, Standard Oil Co., Ginrich, Yeoman 2nd class, - - -, Yeoman, 1st class. Cdr. Curtis recommended for award from Adm. Nimitz. Others from ComDesPac tel directory.