

OPERATION HARDTACK by LCDR Philip (PHIL) DeChene Ret.

In June of 1958 I was a Mineman Striker assigned to the Mine Detachment Augmenting Unit 0302 (MDAU 0302). We were a tenant of Fleet Auxiliary Squadron (FASRON) 117 at Naval Air Station (NAS) Barbers Point, Hawaii. It was then that our double hatted OIC, CWO4 (Gunner) Richards, he was also the Ordnance Division Officer; announced our detachment had been chosen to participate in Operation Hardtack.

Operation Hardtack involved placing U.S. Naval Ships, weapons systems and instrumentation around an underwater nuclear device and then analyzing the results of the explosion. The naval assets included surface ships, small K class submarines and underwater mines.

The mine inventory included the MK 25, 36, 39, 49, 50 and 52. I don't believe the MK 52 had been deployed at the time and the people who were responsible for assembling the 52's were either from the Naval Ordnance Laboratory or the Naval Mine Engineering Facility or both.

The nuclear device would be exploded at the Eniwetok Atoll (currently spelled Enewetak) of the southwestern Pacific. Lines radiating out from the center subdivided the circular test area, which formed pie-shaped sections. The 10K device would be lowered to a specific depth in the center of the pie. One of the pie-shaped sections was reserved for mines.

The mines were to be laid on the bottom at various distances from where the device was to be detonated. The minefield design, unlike an operational mine field, called for the mines to be laid in clusters of 4 of the same MK but of different MOD's. I either never knew or have forgotten what the minimum to maximum distance was from the nuclear device, but several rows of clusters would arc from the narrow to the wide slice of the pie shaped test area.

MDAU 0302 Crew aboard the USS Lawrence County LST 887. Back row, left to right: Hoffman, Damiano, Stinchcomb, Gunner Richards and Ross Johnson. Middle row left to right: View, DeChene, Riley, Savoy, McCan, and Foster. Front row left to right: Hines, Nulph, Morrisette, Lemar, and Chief Levesque.

In the early summer of 1958 at NAS Barbers Point, MDAU 0302 began designing the method by which we would be able to lay 4 mines in a cluster and also mark the location once the mines were on the bottom. What we thought would be the final design consisted of a rectangular frame made of 10" X 10" timbers. The frame was equally subdivided by two 10" X 10" timbers that crossed over between the long sides of the rectangular frame. With these two "stringers" and the short ends of the rectangular frame the design provided four supports to run eye bolts through and secure the mines to the frame by running a cable through the eye bolts and the mine's lugs. The top of the frame also had eyebolts for cables to be attached to a crane so the whole assembly; with mines hanging below the frame could be lifted from the deck and lowered to the surface of the water and released.

To mark the position of the mine cluster in the water, a 6-ft. solid cube made of 10" X 10" timbers was constructed to act as a float. The bulky floats would be connected to the frame that held the mines by a length of cable. I don't recall the depth of water the mines were to be planted in, but there was a large coil of cable that went with each float. The top of the float had a hole drilled in it for the insertion of a 20 ft. bamboo pole that had a pennant attached to the other end. At the time all this designing was being done little did I know that in my future there would be a direct relationship between the 20-ft. poles and myself.

Our shop at Barbers Point was not large enough to accommodate the number of mines that had to be assembled for this operation; therefore, the mines were delivered to building 8 at NAD West loch. We rode in the back of a 2 1/2-ton truck each day from our shop to West loch to assemble and test the mines. We were wearing fatigues now instead of dungarees. Why I really don't know, but it certainly made us feel we were a unique and special group; even though we were teased by our fellow minemen at Westloch as being "Plaster Mechanics" because our mines were not filled with explosives.

Several of us missed playing horseshoes during the lunch hour at West loch so I invented the extender/clock well gasket tossing game. I stuck two sticks in the cracks of the concrete floor at building 8 about half the distance apart as the stakes for horseshoes and we tossed extender/clock starter flat gaskets at them. All horseshoe rules applied. For those who played "leaner rules" there were some good arguments about the floppy leaners. It became quite popular as a noon time event and I probably lost the chance to out-market the hula-hoop.

The mines were assembled and tested and a time-fire-recorder was installed in the booster well that would stop operating when the detonator in the extender fired. The batteries were removed from the mines and they were buttoned up and crated for transportation.

In June of 1958 we learned that our unit, with the mines and equipment, would sail on the USS Lawrence County, LST 887. The

mines were loaded aboard and as I recall there were two rows stacked two high on the port and starboard side of the tank deck. The frames and bulk floats were loaded on the main deck.

We got underway early one sunny Hawaiian morning from West loch and were soon out of the Pearl Harbor Channel pulling away from the Islands. This was my first time at sea so I went to the bow on the main deck and figured if I was going to get seasick lets get it over with. I stared at the swells for a while and got a little light headed, but that soon passed and I felt good that I now knew that I had "sea legs"; for this time anyway.

Our unit was assigned the living quarters on the deck beneath the main deck on the fantail just over the screws. We soon learned the screws spent much of their time partially out of the water, which, with a rumbling noise, gave the fantail a good shaking. An LST is designed to be beached bow first to facilitate the off-loading of vehicles, men and supplies directly on land. Therefore, the bottom is flat and the keel takes a 6-ft. draft forward and a 13-ft. draft aft. This might be a great design for running up on and getting off of the beach, but for being underway it has a lot to be desired. Even in a low sea state with a 9 knot headway she would struggle up the face of the swells, shake her fantail as the screws came out of the water while going over the crest and then slide down the back of the swell only to slam into the face of the next oncoming swell with her blunt bow. When the swells were coming at us from the stern they would catch up and pass us by and the reverse ride would be experienced. Actually she was a lot of fun to be on.

It was difficult to get any sleep the first few nights from the rumbling and shaking the screws caused each time they came out of the water, but surprisingly we got used to it and had no problems sleeping, until after about three days at sea. On this particular night I was sound asleep until about 0200. All of a sudden I awoke and lifted my head as much as you can in a ship's bunk. There was something strange going on. Soon I could see in the dim light that others were waking and sitting up. In our groggy state we were looking around wondering what was happening. Then I realized, there was no rumbling or shaking. We had awakened to a strange silence and smooth rocking. We were adrift! The engines had quit so we silently rocked and drifted for about 30 minutes. I think we made more headway adrift, wrong direction probably, than we did while underway. Well, they got the engines going and we were soon rumbled and shaken back to sleep. Believe it or not, early the very next morning the same scenario occurred, only this time we had lost steering. I was beginning to wonder about the seaworthiness of this vessel.

Actually the USS Lawrence County LST 887 was supposed to be someplace in a shipyard being decommissioned, an event I began to think might occur while we were in the Mid-Pacific.

LST 887 came into a few of our lives a month or so before we ever set foot on her deck. Hoffman myself and I believe Stinchcomb went to see a movie called "Deep Six". Some of you might be familiar with it. Allan Ladd played the part of a Naval Officer on a destroyer who was a Quaker and torn between his pacifist teachings and his loyalty to country. The movie took place in the Aleutian Islands and one scene was at the pier in Dutch Harbor, Alaska where the destroyer crew got in a fight with an LST crew; with the LST in the background. I made the comment that "There was our LST". However, the LST that was originally assigned to carry MDAU 0302 and the mines was not the one in the movie. That LST was in Hawaii and was the Chittenden County, LST 561. However, she ran aground on Kauai in March of '58 in a manner she was not designed to run aground. (She was subsequently salvaged and sunk by the Submarine Sargo off Oahu in November of '58). So, they delayed the decommissioning of the Lawrence County and reassigned her to participate in Operation Hardtack. We learned after coming onboard the intended last official task for LST 887 was to support the movie company that made "Deep Six". They had carried some of the movie crew and equipment to Dutch Harbor and acted as a camera platform for some of the at-sea-scenes. And, yes members of the crew were some of the extras that were fighting on the pier at Dutch Harbor.

Most of the 14 days it took us to get to Eniwetok was uneventful. I don't recall any of the MDAU crew except Stinchcomb being assigned any specific duties. Stinchcomb was assigned to mess cook duties, and I believe that was only until we arrived at Eniwetok. We got to meet some of the crew and in general observed what the crew did to keep her afloat and headed in the right direction. I remember that MN1 Ross Johnson, after teaching himself some semaphore went forward on the main deck, faced the bridge and sent a message (not to be printed here) to the signalman. The signalman returned an appropriate message (also not to be printed here). It was all in good fun and helped break the boredom that was beginning to set in. There was a member of the ship's crew, Herminiano Salcedo, a Bosun's Mate First Class, who had been in the Navy over thirty years. He was an expert on knots and claimed to have invented knots that were in the Navy's knot book. I don't doubt that he did as he showed us a bunch of useful and trick knots that none of us had seen or heard of before. I have long since forgotten every one of them, including some of the stories he told us of the sailing ships he had been on before WWII. Another thing some did to make the passage a little exciting was to go swimming. The bow of an LST has a ramp that is swung down, after the ship is beached, to facilitate the off loading of vehicles and equipment. When this ramp is shut it provides the bow-end watertight integrity to the tank deck of the ship. The two doors that form the bow of the ship and that swing open so the ramp can be dropped down are not watertight. Therefore, when the ship is underway there is a somewhat sloshing pool of seawater between the closed doors and the closed watertight ramp. There is a hatch in the main deck just at the end of the bow that is hidden behind the two forward 40MM gun tubs. From the opened hatch you can climb down the steel beam ribs of the bow doors to the "swimming pool". Who said this wasn't going to be a luxury cruise.

After about 14 days at sea the word was passed that the fleet at Eniwetok had been sighted. It was strange to go up on deck and see on the horizon what appeared to be a scattering of small poles sticking up out of the ocean. As we drew closer these "poles" turned into masts which eventually lead down to the superstructure and hulls of the ships anchored in the bay at Eniwetok. We didn't see any land until we got much closer to the anchored fleet and finally we could see the waves breaking on the islands of the atoll. The ship's crew brought the LST to our designated spot in the anchorage and dropped anchor. If I recall correctly, to the dismay of the LST crew, MN1 Ross Johnson won the anchor pool.

As I explained before this crew was not the happiest in the Navy nor were their seamanship skills and teamwork honed as well as could be. One day we got underway to pull alongside of an anchored AKA to take on supplies. The special sea and anchor detail made the approach too fast and at too much of an angle. We struck the other vessel with a terrific blow with our starboard bow and quickly bounced off leaving a small dent or so in both vessels. One thing was the paint marks were gray on gray so were not too noticeable. If that maneuver wasn't classified as a collision in the LST Captain's fitrep then it must have come real close. We made it on the second attempt.

It was not long after we arrived at Eniwetok that one of our two evaporators broke down and we were put on water hours. We had two showers just off of our berthing compartment and the valve was padlocked shut except for 15 minutes in the evening. There were 14 men in the compartment. So it was jump-in soap-down jump-out and wash while others got soaped down. When an opening came it was jump back in-rinse off-jump back out and dry off.

There was an LSD in the fleet at Eniwetok that was making enough fresh water for the whole fleet. According to the crew the Captain was too proud to request assistance. However, one day we got underway and pulled alongside of the LSD and topped off our freshwater tanks. One of LST 887's tasks at Eniwetok was to support the LCM's that were constantly running between the anchored ships delivering passengers, mail, supplies and such. LST 887 was to refuel them when necessary. As the story goes someone used the wrong line and poured what fresh water we had into one of the LCM's fuel tanks. Oh, by the way we struck the LSD hard enough to knock our port LCVP off of its launch rails. Can everyone say "McHale's Navy".

Now that we had fresh water we were taken off of water hours. One night I was in the shower and after washing my face and opening my eyes it was pitch black. I thought I had gone blind. Then all of a sudden over the 1MC came "Fire-Fire-Fire" "Fire in the auxiliary generator room deck so-and-so and frame umpty-umpty." In our compartment there was a ladder leading to a hatch in the main deck. Someone opened the hatch and with that light and some coming from an emergency lantern I could see enough to grab someone's blanket off of their bunk and follow others climbing the ladder to the main deck. As we were not part of the ship's crew we had no fire and damage control duties so we went to our lifeboat stations for muster. Standing there wrapped only in a blanket I sure was glad we were in the South and not the North Pacific. Fortunately the fire was extinguished and we didn't have to abandon ship.

After we had been at Eniwetok for a while it was announced that there would be a nuclear detonation in the morning around 0500. I believe that everyone was up early that day to see what was going to happen. The countdown was announced over the 1MC and close to zero hour warnings were given for those that did not have special goggles to turn away from the blast and not to turn around until the flash has subsided. At zero hour the night lit up brighter than day and when it became reasonably dark again I turned toward the blast and saw a twisting column of fire, not smoke, rising up into the sky. The column had a purple cast to it and what looked like sparks ranging from the size

of cars to houses were falling off to the leeward side. Just about the time the column began to form into a mushroom cloud it had reached an altitude where the early morning sun's rays struck it. It was an awesome sight to have the lower part of the column in a dark purple glow and the mushroom cap in a bright yellow-white. What was also strange was the sound. There was none. Shortly after the detonation there was a sound much like the sharp bark of a 5"-54 firing, but after that nothing like the roaring and rumbling that you hear in the movies and on TV. They must dub that sound in for effect. While we were at Eniwetok we observed 4 atomic and 3 hydrogen detonations and the sound was the same in each instance.

Some place in the schedule of things we began disassembling the mines and reassembling them with the batteries installed. I believe the first ones that were assembled were MK 25's. After four mines were completed the crane lowered one of the frames down to the tank deck through a cargo hatch. We attached the mines to the frame with cables and cable clamps. The crane lifted the assembly up to the main deck and then the assembly was to be lowered over the side to a Fleet Tug (ATF). I believe the name of the tug was the USS Iroquois. As the crane was swinging the assembly towards the edge of the main deck the frame collapsed. It didn't come apart; it just seemed to fold in on itself with the mines still hanging at various angles. Back to the drawing board.

I'm sure because of the time constraint the KISS (Keep It Simple Stupid) principle prevailed and the solution was to loop a short piece of cable through the lugs and secure the ends with cable clamps. Then we looped another short piece of cable through the four loops that were on the four mines. When the crane lifted the mines they hung against each other. The mines were then lowered over the side of the LST and secured to the side of the ATF by a thick line attached to the bollards on the ATF main deck and the cable loops on the mines. A float was then lowered to the ATF and secured to a set of bollards just aft of the ones the mines were secured to. One end of a long cable was then attached to the cable loop on the mines and the other end was attached to an eye bolt on the bottom of the float. Two of these assemblies were attached to the port and starboard side of the ATF.

The planting plan was for the ATF to sail out to the minefield and plant specific mine types in specific locations in the minefield. After the mines and the floats were laid a volunteer team of minemen would be towed in a seven-man life raft by the ATF to each of the floats and the team would install the 20ft-bamboo pole in the hole on top of the float. The pole had a pennant on the top end. Gunner Richards, Hoffman, myself and two other MDAU team members, I don't recall their names, were in the first team.

We had the mines and floats attached to the ATF, our team had transferred from the LST and we were underway for the test area before noon on the first day of the operation. When we arrived at our designated area of the test range we began laying the mines.

The planting procedure was, after the ATF stopped making any headway, the deck crew was given a signal from the bridge to cut the securing lines of the first clump of mines and the float. The cutting method used was to chop the securing line with a fire axe where the line ran over the gunwale of the ship. There were two sailors doing the chopping; one for the mines and one for the float. They both started at the same time. Two chops and the mines were headed for the bottom of the bay with the mooring line between the mines and the float rapidly paying out. The other sailor made three panicky swings and only managed to nick the float securing line. The mooring line was getting short mighty fast. I remember thinking that the lines are either going to snap or the side of the ATF is going to get pulled off. As it was the fourth hit cut the securing line enough so it broke and the float dropped into the water. As we pulled away from the first plant we noticed that the float was floating with the top just an inch or so above the surface. We had envisioned that at least a foot or more of the float would be visible.

Once the minefield was planted we needed to insert the poles with the pendants on the end in the holes on top of the floats. Gunner Richards, Hoffman, two others and myself volunteered to be the first. We were divided into two man teams. Hoffman and I were one of the teams. We were outfitted with bathing suits, facemask and snorkel. One person in each team had a hammer with a lanyard around his wrist and the other team member wore a belt with a cloth pouch full of small wooden wedges. The pouch had a drawstring to keep the wedges from floating away.

We boarded the ATF from the LST and sailed out to the minefield. On the way we inflated a seven-man life raft on the fantail of the ATF. A long line was attached to a cleat on the ATF and the other end had a pelican hook that was clipped onto the bow end of line that went around the life raft. The pelican hook had a short lanyard on it that could be pulled to release it and the towing line from the raft, thus cutting us loose from the ATF.

At the edge of the minefield we lowered the life raft over the fantail and went over the side and into the life raft from a rope ladder. Five or so of the pendent poles were handed down to us and we placed them in the raft between us with most of the pole protruding out from the stern of the raft.

I don't know how they get seven men in a seven-man life raft. It was very crowded with only five. Gunner Richards was in the bow where he could release the pelican hook, one team was in line on the starboard side and the other team was in line on the port side. In our team Hoffman had the pouch with the wedges and I had the hammer.

The plan was that the ATF would tow us into the minefield and line us up with one of the floats. As we neared the float the Gunner would release the pelican hook and break us free of the ATF. Then one team would swim to the float pulling one of the pendent poles with them. They would get on top of the float insert the 20ft pendent pole in the hole and secure it with the wooded wedges. The other team in the raft would use their paddles to keep the raft near the float. Meanwhile the ATF would circle around and drag the tow line to us so we could re-secure the pelican hook to the raft and the ATF would tow us to the next float. Another great plan that was never practiced.

The ATF got underway and looked like it was slowly taking up the slack in the tow line. I don't know how many knots the ATF was doing, but shortly after the tow line went taut and we began to move the raft did not plane on the surface as we had expected it. Instead the bow raised up and the stern began to go under. We wrapped one arm around the pendant poles so we would not lose them and hung on for dear life with the other.

The ATF maintained a speed that kept about a third of the raft's bow out of the water and the rest of us in more than waist deep water. They towed us like that for about 5 minutes until we were along side the first buoy. At that point the Gunner pulled the lanyard on the pelican hook and released the towline. We went from leaning back hard to slamming forward into each other as the raft popped to the surface and came to a rapid stop.

Once we caught our breath and got situated in the raft Hoffman and I went over the side with our gear and a pendant pole. We had drifted some distance from the float so we had quite a swim. Swimming with a hammer hanging from your wrist and pulling a 20ft bamboo pole proved to be a little more difficult than expected. The sea state was low and the float was only an inch or so above the surface so it was easy to climb on. I'm sure we both anticipated a little rest before putting the pole up and securing it. However, as soon as we got on the float it began to sink. We were both on our knees so it was not long before the water was up to our necks. We stared wide-eyed at each other and without a word up went the pole and I grabbed the hammer. We are now under water. I saw two wedges float out of Hoffman's pouch and up past my face. He got the third one and put it in the hole where the pole was inserted. I quickly hammered it in place. Quickly? Have you ever hammered underwater while sinking? The wedge held so we tumbled off of the float. I believe it got to the surface before we did. We got your arms up on the float and rested. At that time and between gasps there was an exchange of words, which I will not repeat here. All I need to say is that we did give a lot of deserved credit to those who thought this whole idea up.

Now we looked around for our raft. First I saw the ATF and it looked like it was on the horizon. It wasn't, but it looked a long way off. When we finally spotted the raft it didn't look much closer. And they were both getting smaller. I knew it was too far for me to try swimming and Hoffman expressed the same thoughts. We had our forearms on the float and trying to tread water at the same time. We were both pretty tired by the time the ATF got the towline hooked up to the raft and towed the raft over to us. It turned out the current was too strong for two people to paddle and maintain a station near the float.

After we got aboard the raft the ATF jerked us to the next float with us again hanging on for dear life. This time the second crew took the pole to the float and we paddled hard attempting to stay near them. The ATF immediately circled around and we hooked back up to the towline and the second crew didn't have to wait as long as we did to get picked up.

I don't recall how many poles we inserted that day, but I believe we spent three or four hours on the range. If I recall correctly it took another day or two to finish the job. The gunner took a different crew each day.

When the day came to detonate the underwater device our LST raised anchor and sailed to the test range. This was not a test that involved the sinking of ships, but there were some old destroyers and other types of non-combat ships with sensors onboard that were anchored close to ground zero. We arrived a few hours before the test and anchored about four miles from ground (water) zero. We were again kept informed of the countdown over the 1MC. This time there would be no dangerous flash so we did not have to turn away from the blast. When the detonation occurred an enormous column of white water lifted vertically up out of the ocean. Surprisingly we heard no sound. We were situated on the windward side of the blast and the resulting wave died quickly before it reached us, but you could see the underwater shock wave coming fast and it gave the ship a good shaking when it struck.

Shortly after the test we raised anchor and got underway for the underwater mine test area. I don't believe that they expected to find any of the flags or flag poles still standing, but they had taken bearings on the flags and I expect they intended to find the bulk floats and raise the mines with the attached lines. We crisscrossed the area several times and found nothing. What we did next was to be my first and only experience with being deathly seasick.

We anchored and then lowered one of the little LCVPs over the side. I can't remember if I volunteered or was volunteered; never the less I went into the LCVP with the EOD Team. They were equipped with what I remember to be "queen gear". It consisted of a cylindrical magnetometer that was attached by a long cable to instruments that would indicate when we were over metallic objects. To locate the mines the magnetometer had to be held some where between 10 and 20 ft. above the bottom of the ocean. That was my job. I had to get up on the top the grating on the LCVP's ramp and lower the magnetometer down to the bottom of the ocean and then raise it 10 to 20 ft. Not a hard job in a clam sea, but the swells were running such that at one point I could look to the stern of the LCVP where the EOD personnel were watching the instruments and they would be below me and then in the next instant they would be high above me. I was holding on with one arm and trying to adjust the magnetometer cable with the other and up chucking over the side at the same time. It was a long day. We did locate some of the mines, but didn't recover any that day.

The next day we recovered some of the mines. I stayed on the LST and was involved with the disassembly while others went looking for more mines. As I recall all the mines were eventually found. The mines that were on the outer fringes of the range received little or no damage, but the ones closer in were significant rejects. Some of the MK 36 and MK 25 mines looked like a giant had picked them up by the explosive end and whacked the instrument compartment with their other hand. Everything was squashed against the explosive compartment. Some of the Mk 39's convex tail plates were concave. The MK 11 firing Mechanisms were pushed in so tight we had to screw a large lag bolt into them, put a 2X4 across the tail of the mine, attach a jack and jack the mechanisms out.

I was never privy to the results of the test and I'm sure they were classified at one time, and may still be. However, I do feel I was fortunate to have been involved. Before all the mines were recovered and disassembled we received orders that half of the team had to return to Hawaii to prepare for a fleet exercise. We flew back so did not get to experience the return cruise on the USS Lawrence County, LST 887 as some other disgruntled sailors did.