

MVI

9 December 1953

(CORNER BROOK -

DELAWARE - a-3 Bd)

From: Chief, Merchant Vessel Inspection Division  
To: Commandant  
Via: Chief, Office of Merchant Marine Safety

Subj: Marine Board of Investigation; SS CORNER BROOK - pilot vessel  
DELAWARE, collision, Delaware Bay, 17 May 1953

1. Shortly after midnight on 17 May 1953 the SS CORNER BROOK (Canadian), a freight vessel of 5767 g.t., was outbound in the lower Delaware Bay and proceeding for a rendezvous with the pilot vessel DELAWARE. The weather was foggy and both vessels were using radar for navigation purposes. When each vessel sighted the other, neither vessel was aware of the course, speed, or intentions of the other and because of close proximity neither could take effective collision-avoiding action or reduce speed sufficient to avert collision, and a collision resulted at 0213 in a position 1.3 miles 3 degrees true from Harbor of Refuge Light. The DELAWARE lost one crew member by drowning and her damage was estimated at \$42,000. No personnel were injured or lost on the CORNER BROOK and the vessel sustained no damage.

2. Pursuant to the provisions of Title 46 C.F.R. Part 136, the record of the Marine Board of Investigation convened to investigate subject casualty, together with its Findings of Fact, Opinions and Recommendations, has been reviewed and is forwarded herewith.

#### REMARKS

3. The Findings of Fact and Conclusions of the Board, which indicate that both vessels while navigating during fog relied upon radar information at the expense of navigating with caution under the circumstances, are concurred with and hence such fault in the opinion of HQ contributed to the collision.

4. Subject to the foregoing Remarks it is recommended that the Findings of Fact, Opinions and Recommendations of the Marine Board of Investigation convened to investigate subject casualty be approved.

(Signed) P. A. Ovenden

P. A. OVENDEN

10 Dec. 1953

FIRST ENDORSEMENT ON MWI memorandum of 9 December 1953

From: Chief, Office of Merchant Marine Safety  
To: Commandant

Subj: Marine Board of Investigation; IS CORNER BRONX - pilot vessel  
DELAWARE, collision, Delaware Bay, 17 May 1953

Forwarded, recommending approval.

(Signed) H. C. Shephard  
H. C. SHEPHEARD

11 DEC 1953

APPROVED:

(Signed) Merlin O'Neill

MERLIN O'NEILL  
Vice Admiral, U. S. Coast Guard  
Commandant

NVI

17 December 1953

(PAN MASSACHUSETTS -  
PHOENIX - a-3 Bl)

From: Chief, Merchant Vessel Inspection Division  
To: Commandant  
Via: Chief, Office of Merchant Marine Safety

Subj: Marine Board of Investigation; SS PAN MASSACHUSETTS - SS PHOENIX,  
tank vessels; collision Delaware River, 5 June 1953, with loss of life

1. On 5 June 1953 on the Delaware River the SS PHOENIX, a tanker of 14,179 g.t., without cargo, was outbound to sea and the SS PAN MASSACHUSETTS, a tanker of 11,081 g.t. fully loaded, was inbound for Philadelphia. The night was clear and dark and the tide was at maximum ebb about 2½ knots. Both vessels were in an approaching situation at the intersection of Reedy Island and New Castle Ranges and exchanged whistle signals for a normal port to port passing. The PHOENIX in making her turn at the intersection was affected by the maximum ebb tide and was set over to the left side of the channel across the bow of the PAN MASSACHUSETTS. Although collision-avoiding action followed, the vessels collided at about 2316 in the vicinity of Elsinboro Point, New Jersey. Several violent explosions followed on the PHOENIX causing her to sink and become a total loss. The PAN MASSACHUSETTS burned and has been considered a constructive total loss. Four crew members from the PHOENIX lost their lives. There was no loss of life from the PAN MASSACHUSETTS.

2. Pursuant to the provisions of Title 46 U.S.C. Part 136, the record of the Marine Board of Investigation convened to investigate subject casualty, together with its Findings of Fact, Conclusions and Recommendations, has been reviewed and is forwarded herewith.

#### REMARKS

3. The Findings of Fact, paragraphs 21 and 22, Conclusions, paragraphs 10, 11, 12 and 13, and Recommendations, paragraph 4, of the Board's report in effect state that the experience of a survivor or survivors in the water indicates that the kapok life jacket approved by the U. S. Coast Guard was deficient. It is in effect stated that the upper tie tape is located so high on the life preserver that when the wearer is in the water, this tie tape causes considerable discomfort to the throat and that when this tape is untied, the life preserver has a tendency to ride up on the body of the wearer and thus cause the wearer to sink lower in the water.

4. The upper tie tape was properly located on the life preservers used by the survivors of the PHOENIX and the PAN MASSACHUSETTS. This tie tape was located in conformance with the cutting pattern and arrangement print furnished to the manufacturers of life preservers.

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5. The location of the upper tie tape on the approved life preserver was arrived at after most exhaustive experience of survivors in war action and other casualties had been studied and exhaustive tests conducted. The life preserver with the upper tie tape is so designed that when a wearer enters the water he will float in an upright and in a slightly tilted backward position, the upper tie tape preventing the face from being immersed in the water. When it is realized that in the abandonment of a vessel many persons enter the water in a shocked, unconscious or semi-conscious condition, as well as under other psychological and physiological conditions where they do not have command of their faculties, it is most important that the upper tie tape be located in its present position so as to keep the wearer's head out of the water until he has regained consciousness and his rational faculties.

6. The approved life preserver has a body strap and a lower drawstring tape for adjusting and securing the life preserver to the body. The body strap and drawstring tape can be easily adjusted by the wearer in the water so as to relieve any and all discomfort to the throat that may be caused by the upper tie tape. The body strap and the drawstring tape are so designed that they when properly adjusted will prevent the life preserver from riding up on the body of the wearer.

7. The difficulties in the use of the approved life preservers indicated in the record were not due to any defect in the design or other deficiencies in the life preserver. A careful analysis of the complaints clearly indicates that the difficulty was due to lack of confidence, knowledge of the characteristics of a life preserver, and experience and training in the use of a life preserver while in the water. It is significant to note that practically the entire crews of the PHENIX and PAN MASSACHUSETTS were saved by the use of the approved life preservers. In connection with the location of the upper tie tape, attention is invited to the following testimony, page 396, question 273:

"Q. But you still retained the life preserver?

"A. It must have thrown me on my back with my face up because I don't remember anything until I got down by the anchor chain. I don't remember hitting the water. I opened my eyes and I remember seeing a round circle of light reflected on the water. It looked like about that big.  
(Witness indicates) I'll never forget that. That is the last I remember I was by the anchor chain."

8. Subject to the foregoing Remarks it is recommended that the Findings of Fact, Conclusions and Recommendations of the Marine Board of Investigation convened to investigate subject casualty be approved.

(signed) P. A. Ovensen

P. A. OVENSEN

1. John, Kenneth, and James Investigative Services  
Investment

Subj: Marine Board of Investigation; 21 Feb 1944; 100-104715 - 101 HUNTING,  
Back ramming, collision, Blount Island, 5 Nov 1943, with loss of  
1944

Estimated, reasonably expected.

(signed) E. C. Shephard  
E. C. SHEPARD

APPROVED: 31 DEC 1953

(signed) Merlin O'Neill  
MERLIN O'NEILL  
 Vice Admiral, U. S. Coast Guard  
 Commandant

RECORD OF PROCEEDINGS  
OF A  
MARINE BOARD OF INVESTIGATION  
CONVENED AT THE  
MARINE INSPECTION OFFICE, THIRD COAST GUARD DISTRICT  
ROOM 803 CUSTOM HOUSE, PHILADELPHIA PA.

ON  
19, 25 & 26 MAY 1953

TO INQUIRE INTO AND INVESTIGATE THE CIRCUMSTANCES SURROUNDING  
THE COLLISION BETWEEN THE SS CORNER BROOK (CANADIAN)

AND

THE PILOT BOAT DELAWARE AT THE MOUTH OF DELAWARE BAY

ON  
17 MAY, 1953

The Board arrived at the following Findings, Conclusions and Recommendations:

FINDINGS OF FACT:

1. At 0213 EDST, 17 May, 1953, the Canadian freight vessel CORNER BROOK and the pilot station vessel DELAWARE were involved in a collision at the mouth of the Delaware Bay, 1.3 miles 33 degrees true from the Harbor of Refuge Light (LL 1651).
2. No damage was incurred by the CORNER BROOK and no injuries were sustained by any of her personnel.
3. On the DELAWARE, both the masts were broken and the deck house aft of the fidley was crushed by the overhanging bow of the CORNER BROOK, but damage to the hull was negligible. The Chief Engineer, [REDACTED], License No. [REDACTED], [REDACTED], was seriously injured when pinned to his bunk by the deck house wreckage, but has since recovered. The engineer on watch, Lloyd T. Larrimore, Bk [REDACTED], age [REDACTED], [REDACTED] was observed as he jumped over the side immediately after the impact and was not seen again until his body was recovered off the mouth of the Bay on 26 May, 1953.
4. The weather prior to and at the time of the casualty was foggy, visibility estimated at 1000 feet by CORNER BROOK witnesses, and 100 feet by those on board the DELAWARE. Wind and sea were calm and the tide was at the first of the ebb.
5. The SS CORNER BROOK of Canadian registry, is a steel hull, steam screw, ocean freight vessel of 5767 gross tons, 440 feet long, built in 1925, owned and operated by Bowaters Newfoundland Pulp and Paper, Ltd., Corner Brook, Newfoundland, and at the time of the casualty was under the command of Charles K. Homer, Corner Brook, Newfoundland, acting under the authority of his British Board of Trade certificate. [REDACTED] of [REDACTED] was on board in the capacity of pilot and was acting under the authority of his State pilot's license issued by the State of Delaware.
6. The Pilot Station vessel DELAWARE is a numbered motorboat, 11 H 301, length 106'5", beam 25', draft 12', wood hull, oil screw, built in 1929, owned and operated by the Pilots' Association for the Bay and River Delaware, 322 Chestnut St., Philadelphia, Pa. and at the time of the collision was under the command of [REDACTED], Bk [REDACTED].

7. Although the master and crew members of the DELAWARE possessed either licenses or documents issued by the Coast Guard, such possession was not a condition of their employment.

8. The CORNER BROOK with 4,000 tons of newsprint, departed Philadelphia on the evening of 16 May, 1953 en route to Norfolk, Va. Prior to departure, all navigation and steering gear was tested and found in good working order, and sailing draft was 19'3" forward, 22'3" aft.

9. Under the con of Pilot [REDACTED], the CORNER BROOK proceeded down the Delaware without incident until reaching Miah Muhl Light at 0035 17 May, when the visibility began to decrease. Fog signals were sounded from that time forward and the radar was turned on on the 3-mile scale and continued in operation up until the time the collision occurred. The engines were placed on standby but full ahead at an estimated 10 knots was maintained until visibility decreased to 1/2 mile after passing buoy 16. Engines were slowed to 1/2 ahead at that time and the speed was estimated at 7 knots. Buoy 16 was the last navigational aid observed visually but the radar was working perfectly and all buoys appeared on the radar at a mile and a half, and larger objects appeared at the edge of the scope at the 3-mile range. Two anchored vessels were passed 1/4 mile off in the vicinity of Brandywine, but were not seen visually. After passing buoy 7 at Brown Shoal, a course of 170° was set towards the Harbor of Refuge. At about 0150 a radar target later identified as the DELAWARE, was picked up three miles distant 15° on the port bow. Visibility had improved somewhat and full ahead was resumed. Assuming the target to be the pilot station vessel due to its position, the customary four-blast signal was sounded to signify that a pilot was aboard. An answering four-blast signal was heard by the pilot, the helmsman, and the mate on watch. Speed was reduced to half ahead at 0202, and at 0205 the heading was changed to 175°T. Radar bearings on the DELAWARE, taken by both the pilot and the mate on watch appeared to open slightly to port as the vessels continued to close. At 0210 the look of the DELAWARE's navigation lights was observed three points on the port bow and speed was further reduced to slow ahead. A moment later the lights themselves became visible. The DELAWARE was estimated to be about 1,000 feet away, and was assumed to be stopped. The green side light was clearly visible and she appeared to be lying 90 degrees to the CORNER BROOK's course. The master, expecting the pilot to disembark within the next few minutes, went below to the chart room under the bridge to sign the pilot's bills. The pilot and watch officer in the meantime suddenly became aware that the DELAWARE was proceeding across the bow of the CORNER BROOK—slowly at first, then accelerating. The pilot ordered the engines stopped, followed immediately by full astern at 0212, and a three-blast whistle signal was sounded. Within a minute, with still some forward way on the vessel, the lights of the DELAWARE disappeared under the bow and a splintering noise was heard. The



master, having heard the vibration of the engines going astern, returned to the bridge in time to see the DELAWARE disappearing under the bow. The general alarm was sounded at his order and men were directed to the fore-castlehead with ladders and lines. At 0216 the engines were stopped. The boarding boat, which was originally sighted astern of the DELAWARE, had in the meantime, come alongside to port and was lying off a short distance from the CORNER BROOK preparatory to removing the pilot. The boarding boat was directed to the bow but before it arrived the DELAWARE had cleared and was proceeding down the starboard side of the CORNER BROOK under her own power, finally stopping just off the port quarter. The boarding boat was observed going alongside the DELAWARE and shortly thereafter departed towards the Harbor of Refuge. Since no voice or radio contact could be made with the DELAWARE, No. 4 Lifeboat, with the Chief Mate in charge, was lowered to the water. Upon boarding the DELAWARE, the Chief Mate found her abandoned, but with lights on and generators running. The after section of the deck house had been crushed and there was water over the floor boards in the engine room, but no breaks in the hull were apparent. Two lines were run from the DELAWARE to the CORNER BROOK preparatory to taking her in tow, however, the pilot boat PHILADELPHIA arrived on the scene shortly thereafter and took charge of the DELAWARE. The CORNER BROOK was then anchored off the north end of the Harbor of Refuge breakwater where it remained until Pilot Potter was removed at about 0715 EDT and the vessel proceeded to Norfolk, Va.

10. At about 0105 EDT, the pilot boat DELAWARE, after transferring an off-duty pilot to the shore boat, took position 1 1/2 miles ENE of the Harbor of Refuge. Captain [REDACTED] was on the bridge, as he had been for the past 20 hours due to the fog. [REDACTED], an apprentice pilot and acting mate, was at the helm, and [REDACTED] was the deckhand on watch. Aboard the pilot boat were six other crew members and nine pilots. Two additional apprentice pilots were aboard the boarding boat VIRGEN, a small motorboat used to transfer pilots between the vessels serviced and the pilot station boat. The VIRGEN maintained position in sight and astern of the DELAWARE. Visibility was estimated between 75 and 100 feet in dense fog, and the radar was in operation on the 8-mile scale. All navigation and steering gear were in good working order. The radio-telephone speaker was on for ship-to-ship communication, and the frequency modulation speaker was on for communication with other units of the pilots association. At about 0140 a down-bound vessel in the channel was sighted on the radar 6 miles distant. When the vessel was in the vicinity of Brown Shoal, the master, who was expecting the CORNER BROOK, called that vessel on the radio-telephone but no reply was heard. The vessel's progress was followed in the radar, and although no communications had been established, the heading was apparently towards the Harbor of Refuge, and it was therefore assumed she had

a pilot aboard. When the target closed to within 1 1/2 miles, the master ordered the helmsman to put the target on the starboard bow and work up to her slowly. The helmsman set an approximate course of north-northwest, and put the engines on slow ahead. On this heading the target was two points on the starboard bow, and the speed of the DELAWARE between four to five knots. The master called the pilot boat PHILADELPHIA on the radio-telephone and requested the shore boat be sent out. When the target was within one mile still two points on the starboard bow, it disappeared on the scope. This was not considered unusual, and since the lower scales were not reliable, the radar was not shifted from the 8-mile range. The master then ordered the engine stopped, the helmsman complied and then, unbeknownst to the master, placed the rudder five or ten degrees to the left in order to, according to his explanation "put the vessel a little more on my starboard bow." Up to this time, fog signals from the other vessel were heard with difficulty due to the generator running, and after the engine was stopped, the master heard one more fog signal abeam to starboard and not far off. At no time had a four blast signal been heard aboard the DELAWARE nor had such signal been sounded by her. As the master continued to watch and listen, the loom of the other vessel's lights soon became visible on the starboard side. The master estimated that about a minute elapsed before the lights came in clearly, at which time both red and green side lights were observed, and the bow of the vessel was seen approaching directly toward the wheelhouse of the DELAWARE at a 90 degree angle. Full ahead was rung up immediately, and when the red side light closed, hard right rudder was ordered in an attempt to swing the stern of the DELAWARE clear. The master believed he heard whistle signals from the CORNER BROOK at about this time but was not certain. The DELAWARE moved forward only a short distance and had not begun to answer her rudder when the bow of the other vessel contacted her aft of amidships at a 90 degree angle, overriding and crushing the deck house aft of the fidley. [REDACTED], the deck watch, testified he had been in the pilothouse until about 0200, at which time he went below to the galley to make coffee. While in the galley he chanced to look over the starboard side momentarily and saw the port side light of another vessel just forward of the beam, 200 to 300 feet away and well above eye level. Knowing they were about to pick up a pilot, he felt no cause for alarm. About a half a minute or a minute later he looked again and saw the bow of the other vessel was about to collide with the DELAWARE near where he was standing. He rushed out on deck and started forward just as the collision occurred.

11. According to the apprentice pilot operating the VIRGEN, position was being maintained approximately 150 feet off the DELAWARE when suddenly the range lights and red side light of another vessel were observed broad on the starboard bow. Although the distance could not be estimated, it appeared extremely close, and the engines were backed full. The DELAWARE was observed crossing under the bow of the other vessel and, when her

navigation lights disappeared, it was assumed she had passed clear, but with little to spare. The VIRDEN then took position alongside to port of the CORNER BROOK to await the pilot.

12. The impact of the collision was described as slight by the witnesses aboard the DELAWARE. The icebreaker bow of the CORNER BROOK, which cuts back at a 45 degree angle from the stem, overrode and crushed the deckhouse of the DELAWARE aft, forcing the starboard side downward in a 25 degree list. The vessels remained together in this position a few minutes, during which time the general alarm was rung, and life preservers were distributed. The vessels came apart as the CORNER BROOK appeared to back down, and the DELAWARE, with engines still turning full ahead, proceeded down the port side of the CORNER BROOK. Stop bells to the engine room were not answered at first, however, one of the pilots succeeded in stopping the engine and the DELAWARE came to rest off the port quarter of the CORNER BROOK. Moments later the VIRDEN came alongside.

13. [REDACTED], a pilot, testified he was in his bunk when the collision occurred. He immediately went up on deck on the starboard side and seeing the bow of the CORNER BROOK still in the DELAWARE started through the galley towards the other side. Poised on the port rail he saw [REDACTED], the assistant engineer, who hesitated a moment, then jumped over the side. No words were exchanged, and [REDACTED] did not appear to have a life preserver on. Bramhall, [REDACTED] others gathering on the foredeck, went to join them and gave the alarm that [REDACTED] had jumped. The master then threw a life ring into the water from the pilot house, but [REDACTED] was not in sight. During this time, [REDACTED] had gone aft to see if anyone remained inside or below decks and was followed by his father, [REDACTED] one of the pilots aboard. The Chief Engineer, [REDACTED] was found in his bunk, caught beneath the rubble, and together the two men succeeded in extricating him. [REDACTED] was obviously injured seriously and appeared delirious as they carried him forward and put him aboard the VIRDEN. A quick survey of the damage by the master revealed water in the engine room and sparks coming from the generator. Expecting the vessel to sink at any time, he joined the others who had already gone aboard the VIRDEN. Leaving the DELAWARE, the searchlight was used to scan the water in search of the man previously reported overboard, but the course was set directly for the Harbor of Refuge due to the seriousness of [REDACTED] condition. The VIRDEN later returned to search the area for the missing man, and was joined by a Coast Guard boat at about 0405.

CONCLUSIONS:

1. It is considered apparent that the DELAWARE, after stopping her engines continued to carry her headway up until the time the collision occurred. When the CORNER BROOK disappeared from the radarscope at the one mile range her future position could no longer be predicted accurately.

Since the two vessels were approaching on a collision course prior to this time the only safe course of action open to the DELAWARE was to stop dead in the water and her failure to do so was considered the principal cause of the collision. It is believed this failure was aggravated by the fact the master well knew his vessel normally carried her headway a considerable distance after the engines were stopped. In addition, the helmsman's unauthorized movement of the rudder to the left at this time acted to insure that the DELAWARE would cross the course of the on-coming vessel. Notice was also taken of the DELAWARE's failure to maintain a proper lookout. Since the master had timely warning of the CORNERBROOK's presence, however, it is considered that this failure in no way contributed to the casualty; nor was it considered that the condition of the DELAWARE's radar was a contributing factor. While the collision might easily have been averted had the radar been operating properly, suitable allowance could and should have been made in anticipation of the same erratic performance which had been encountered in the past.

2. The actions of the CORNERBROOK while navigating with relation to the DELAWARE were considered by the Board to be satisfactory. Although there appears to be no explanation for the four blast answering signal claimed to have been heard by the CORNERBROOK witnesses, the approach to the pilot vessel was normal and in no way affected by this discrepancy. Having observed the pilot vessel on the radar apparently drifting on station it was reasonable to assume she would remain so until the CORNERBROOK was in position to drop the pilot. Although the subsequent movement of the DELAWARE might have been discernable on the radar, it is not considered likely under the circumstances, since the DELAWARE did not begin to close until within the mile and a half range during which time the CORNER BROOK was slowing down and the relative bearing remained fairly constant. Based on the time elapsed between the original sighting and the actual impact, the CORNER BROOK's estimate of the visibility was accepted as being more nearly correct. The increased height of the CORNER BROOK witnesses undoubtedly provided them with depth perception not available to those on the DELAWARE who had to look upward to see the approaching lights. From the damage sustained by the DELAWARE and the description of the collision by her witnesses, it is concluded that the CORNERBROOK had only bare headway at the moment of impact. The timely reversal of engines by the CORNER BROOK undoubtedly succeeded in minimizing the effect of this collision.

3. It is the opinion of the Board that the DELAWARE failed from the outset to exercise the degree of caution called for by the prevailing conditions. That the master was aware of the necessity for such caution was evidenced by his refusal to entrust the operation of the vessel to a less experienced hand for over 20 hours prior to the casualty. However, in addition to not maintaining a lookout the admitted failure to properly sound fog signals while hove to unnecessarily hazarded the vessel. It appears the master considered the presence of the radar as sufficient reason for non-compliance with these requirements of the pilot rules but this contention is not shared by the Board. The seriousness of these violations was magnified by the fact that the radar was not functioning properly and by the fact that the hearing ability of those in the pilothouse was greatly impaired by generator and engine noises and by the radio loud speakers. The decision to close the downbound radar target on the unsupported assumption that it was a vessel with a state pilot aboard was pure speculation and though correct in this instance, could easily have been otherwise with the possibility of even more disastrous results. A considerable percentage of vessels transiting the lower Bay do not carry state pilots and any one of them might conceivably follow a course similar to the CORNER BROOK's, outbound.

4. The navigation of the CORNER BROOK between Fourteen Foot Bank Light and Brown Shoal also appears deserving of comment. The inference drawn by the Board, based on the testimony of the CORNER BROOK witnesses and of the pilot himself is that the speed of the vessel was dictated by the quality of the radar returns rather than by the weather conditions. The Board therefore feels constrained to point out that the radar when used for the sole purpose of obtaining periodic bearings and distances, is not in itself a method of navigation but rather an invaluable aid to the navigator who should in all other respects adhere to the safe and prudent principles of good seamanship.

#### RECOMMENDATION:

1. In view of the fact that the DELAWARE is an uninspected motor vessel with no consequent requirements regarding licensed or certificated personnel and since the only specific violations of pilot rules were technical in nature and in no way contributed to the casualty, it is recommended that no further action be taken and that the case be closed.

(signed) L. H. Shackelford  
L. H. SHACKELFORD  
Captain, U. S. Coast Guard

(signed) R. Y. Edwards  
R. Y. EDWARDS  
Commander, U. S. Coast Guard

(signed) J. H. Hawley  
J. H. HAWLEY  
Lieutenant Commander, U. S. Coast Guard