Report of the Investigation into the

Loss of the Fishing Vessel

# OCEAN HOUND

with the loss of five lives

on 10/11 August 1991

Marine Accident Investigation Branch 5/7 Brunswick Place SOUTHAMPTON S01 2AN

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#### 1. SUMMARY

This Report is based upon the investigation carried out by the Marine Accident Investigation Branch and also refers in part to the evidence heard at the Coroner's Inquest on those lost, which took place at Brixham on 24 and 25 June 1992.

All times in this Report are GMT unless otherwise specified.

At about 1500 hrs on 10 August 1991, the Brixham registered Motor Fishing Vessel OCEAN HOUND with five people on board, sailed from Zeebrugge, Belgium. OCEAN HOUND had called at Zeebrugge to land the catch from her previous fishing trip and to take on fuel and stores; her intention on sailing is believed to have been to proceed SW through the Dover Strait to the Dungeness area.

Video recordings of Dover Coastguard (CG) radar show that, during the late evening of the 10 August OCEAN HOUND passed through the centre of the Sandettie Bank Traffic Separation Zone, reaching a position 1 mile North of the Sandettie Light Vessel at 2218 hrs. At this time, the Mate of OCEAN HOUND contacted Dover CG on VHF radio, reported the vessel's position, and requested permission to cross the SW bound traffic lane and proceed to Dungeness via the Inshore Zone.

Nothing further was heard from OCEAN HOUND until 0520 hrs on 11 August, when a signal was received from her automatic Emergency Position-Indicating Radio Beacon (EPIRB) giving a position near the Falls Light Vessel, some 11.5 miles to the NE of her last known position as seen by CG radar.

On the CG radar video recording, the radar echo from OCEAN HOUND (identified from the reported position at 2218 hrs) can be seen crossing the traffic lane on a West-North-Westerly course. Just before reaching the North-Western boundary of the lane, OCEAN HOUND appears to change course to a South-Westerly direction. There were several vessels in the vicinity at this time, heading SW down the traffic lane, and at 2337 hrs the echo from one of these vessels can be seen to merge with the smaller echo of OCEAN HOUND. The larger echo continued along the traffic lane without any apparent change of course or speed, but the echo from OCEAN HOUND was not positively re-established.

Investigation has shown that the vessel's bridge and galley clocks had stopped at about 1237 (ship's time), that is 2337 hrs GMT. This fact, coupled with the radar record and other evidence, indicates that at 2337 hrs on 10 August OCEAN HOUND was probably involved in a collision or very close quarter situation with an unidentified vessel, causing her immediate capsize.

Following receipt of the EPIRB distress message at 0520 hrs on 11 August, Dover CG mounted a full scale Search and Rescue (SAR) operation. The body of one of the crew was recovered from the vicinity of the wreck, which was found in a position about 0.7 miles North of the Falls Light Vessel. No survivors (or any other bodies) were found and the search was called off at 0941 hrs on 12 August. A second body was washed ashore on the Kent coast on 4 September 1991.

# 2. PARTICULARS OF VESSEL AND CREW

MFV OCEAN HOUND was steel-hulled, built in the Netherlands in 1984, powered by a Mercedes Benz V12 221 kW engine driving a single propeller, which gave a service speed of about 8 knots. She operated primarily as a beam trawler, though she was also equipped for stern trawling.

The Skipper was part owner of the vessel which was registered at Brixham; her Fishing Number was BM 22.

**Dimensions**:

Length Overall	:	22.30 metres
Length Registered	:	20.63 metres
Beam	:	6.01 metres
Depth	:	2.90 metres
Draught	:	2.365 metres
Freeboard (min)	:	0.535 metres
Displacement (deep)	:	160 tonnes
Gross Tonnage	:	43.28

The vessel's navigation equipment included radar and two Decca Navigators, Mk 21 with paper plotter and Mk 53 with video plotter. A Furuno echo sounder/fish finder was also provided.

OCEAN HOUND held a United Kingdom Fishing Vessel Certificate, issued on 14 November 1989 and valid until 11 February 1993. She had been provided with a Freeboard and Stability booklet, approved by the Department of Transport Marine Directorate on 19 July 1989. An inclining test had been carried out on 20 December 1988.

Lifesaving equipment included two RFD inflatable liferafts, one of 4-person, one of 6-person capacity, and an EPIRB. Hydrostatic release fittings were provided so that this equipment should float free if the vessel sank, and the EPIRB would then transmit automatically on coming to the surface.

On her final voyage, OCEAN HOUND carried a complement of five, including the Skipper who held a Certificate of Competency as Second Hand (Special).

A photograph of OCEAN HOUND is shown at Figure 1.

# 3. NARRATIVE

- 3.1 On the 9 August 1991 OCEAN HOUND arrived at the port of Zeebrugge, Belgium, to land the catch from her previous fishing trip, and to take on fuel and stores. At about 1500 hrs on 10 August she sailed from Zeebrugge, and it is believed that the Skipper's intention was to proceed through the Dover Strait to the Dungeness area. On board were the Skipper and four crew, one of whom was the Skipper's 17 year old son.
- 3.2 It appears clear that the vessel was well-found and well-maintained, and at the time of sailing she was properly manned and equipped for the intended voyage.
- 3.3 The first part of the route taken on sailing from Zeebrugge is not known. First indications of the position of OCEAN HOUND come from the Dover CG radar video recordings, which show an intermittent faint echo at about 2144 hrs, becoming stronger by 2153 hrs, when the vessel was about 1 mile SSE of the Sandettie WSW Buoy. The vessel appears to have passed down the middle of the Sandettie Bank Separation Zone. (See Figure 2)
- 3.4 Shortly after 2100 hrs two private telephone calls were made from the vessel. During the course of one of them the Mate remarked that the visibility was poor due to fog.
- 3.5 At 2218 hrs the vessel arrived at a position 1 mile North of the Sandettie Light Vessel and the Mate contacted Dover CG on the VHF radiotelephone. The conversation was recorded as follows:

"Dover CG, Dover CG, this is FV OCEAN HOUND Dover CG Station Channel 80 Channel 80 Dover CG, Dover CG FV OCEAN HOUND This is Dover CG Good evening Dover CG, FV OCEAN HOUND, we are one mile North of Sandettie Light Ship and we would like to cross the Separation Zone please, and proceed South, inshore traffic to Dungeness. That is fine, no problem. The visibility is about 3 miles that is at Sandettie. Roger, thank you it's improving then."

3.6 It is the 2218 hrs position given by the Mate which identifies the echo of OCEAN HOUND on the CG radar screen so that her movements can be followed on the radar video recording. The "Separation Zone" referred to in the above conversation means the traffic separation scheme, consisting in this area of two traffic lanes, the deep water NE bound route which is about 1.2 miles wide near the Sandettie Light Vessel, and the SW bound lane, about 3 miles wide where OCEAN HOUND intended to cross.

- 3.7 The general visibility at the time was described by the CG as patchy fog (1-5 miles) and at 2258 hrs the ferry SALLY SKY reported dense fog in the area of the East Goodwin. It is probable that the visibility deteriorated as OCEAN HOUND crossed the SW lane.
- 3.8 Tidal streams affecting OCEAN HOUND were as follows:

2218 hrs North East 0.4 knots 2337 hrs North East 2.1 knots High Water Dover was 2319 hrs, with Spring Tides.

- 3.9 The following description is from observation of the Dover CG radar video recording, with the exception of 3.9.2.
  - 3.9.1 OCEAN HOUND crossed the NE bound lane and entered the SW bound lane at 2240 hrs on a course of approximately 280° True.
  - 3.9.2 [2300 hrs: It is probable that the watch changed and the Skipper came on duty with one deckhand. This is based on the assumption that the Mate was on watch at the time of his call to CG and that the watch changed at midnight, ship's time believed to have been BST which is one hour in advance of GMT.]
  - 3.9.3 2307 hrs: Radar echo almost across SW lane when vessel appears to alter course towards South and back into the lane. At this time there were three echoes close to the NE of OCEAN HOUND, all heading SW'ly. A fourth echo (D), which later appeared to merge with that of OCEAN HOUND, can be seen just past the South Falls Buoy. (Figure 3.1)
  - 3.9.4 2320 hrs: Of the three echoes noted above, one (A) appears to be passing clear to the North of OCEAN HOUND, the southern-most one (C) has passed well clear, but the middle echo (B) appears to pass fairly close to that of OCEAN HOUND, which is now seen to be directly in the path of the fourth echo (D). (Figure 3.2)
  - 3.9.5 2337 hrs: The fourth echo (D) is seen to merge with that of OCEAN HOUND. Later investigations reveal that the vessel's clocks stopped at almost exactly this time, again assuming that they were set to BST. (Figure 3.3)
  - 3.9.6 2341-2345: There is a brief re-establishment of an echo further out in the lane, very soon lost in clutter.

- 3.10 0503 hrs: An EPIRB signal, identified as being from OCEAN HOUND, was detected by satellite SARSAT 4, and transmitted, after processing, to Falmouth CG Marine Rescue Co-ordination Centre at 0515 hrs and then to Dover CG Marine Rescue Co-ordination Centre at 0520 hrs. The EPIRB signal indicated a position in the vicinity of the Falls Light Vessel, approximately 11.5 miles NE of the position of OCEAN HOUND at 2337 hrs on 10 August.
- 3.11 Search and Rescue Satellite SARSAT 4, capable of detecting signals from 406 MHz EPIRBs, had made the following passes:

0136 to 0148 hrs 0316 to 0331 hrs 0457 to 0510 hrs - the signal was received during this pass.

- 3.12 Following several VHF radio calls attempting to contact OCEAN HOUND, a Search and Rescue operation was initiated by Dover CG at 0545 hrs.
- 3.13 0635 hrs: A body, later identified as that of a Deckhand on OCEAN HOUND, was recovered by helicopter R166 from a position near the wreck. He was wearing overalls, but no lifejacket or shoes.
- 3.14 The Search and Rescue operation continued, but no survivors were found, or more bodies recovered at this time. The search was called off at 0941 hrs on 12 August.
- 3.15 On 4 September a second body, that of the Skipper of OCEAN HOUND, was washed ashore near Reculver, on the North Kent coast.
- 3.16 The position of OCEAN HOUND at 2337 hrs on 10 August when her radar echo was seen to merge with that of an unknown vessel was 51°09'.4N, 01°37'.4E, about 2.3 miles ENE of CS4 buoy.
- 3.17 The position of the wreck is 51°18'.80N, 01°48'.45E, 0.7 miles North of the Falls Light Vessel, approximately 11.5 NE of the 2337 hrs position.
- 3.18 Dover CG carried out a drift prediction using their SAR computer. Fed with the position at 2337 hrs on 10 August when the echoes merged, and the tidal and wind conditions during the period up to 0503 hrs on 11 August (when the EPIRB signal was received) a centre of drift target 1.5 miles SW of the wreck position was produced, indicating that it was possible for the capsized OCEAN HOUND to have drifted between the two positions during that period.

# 4. INVESTIGATION

Investigation of the accident was based chiefly on interviews with fishermen and others who could give information about the vessel and about fishing practice in similar vessels; inspection of the wreck by divers and by remotely operated vehicles (ROV) equipped to take underwater video film; and study of the CG radar records. The next paragraphs describe the underwater inspections: it should be borne in mind that the area of the accident is subject to strong tides and the operations could only be usefully undertaken near the dates of neap tides and when weather and underwater visibility were reasonably good.

# 4.1 Summary of Diving Operations

20 August 1991

- 4.1.1 The vessel's P & I Club (insurers) contracted UK Project Support Ltd to take an ROV video film of the wreck.
- 4.1.2 This survey provided confirmation that the wreck was that of OCEAN HOUND, lying on her keel with about a 15° heel to starboard, but had to be abandoned when the ROV became entangled. No hull damage was seen at this time.
- 21 August 1991
- 4.1.3 Sea-Lift of Dover was contracted to provide two divers to free the trapped ROV. During this short dive the divers reported that they could not see any damage at bulwark level. The port side trawl gear was on deck, with the port derrick housed. One diver reported that the starboard trawl net containing a quantity of fish was tightly drawn up on the starboard side and sitting on the sea bed. The starboard derrick was in the near vertical position. The other diver reported that the port door to wheelhouse was open.
- 3 and 4 September 1991
- 4.1.4 The vessel's owner contracted Coastal Diving Services UK to retrieve bodies which might be within the wreck. The attempt was hampered by poor underwater visibility and strong tides. The divers reported seeing the starboard derrick outboard and nearly horizontal, the port derrick housed, scuff marks on the fore part of the hull and damaged safety rails on the port forward side of the whaleback. A deflated liferaft was seen trapped within the forward gantry mast.

# 17 and 18 September 1991

4.1.5 Remote Marine Surveys were contracted by next-of-kin to recover bodies, but without success. Divers reported that of the six winch controls in the wheelhouse, the four centre ones appeared to be in the neutral position, with the two outer ones towards aft; the wheelhouse clock had stopped at 1237; the hatch in the wheelhouse leading to the engine-room was open 45°; and the galley drawers were tipped out to starboard.

> It was also reported that the guardrails on starboard forward part of whaleback were buckled inward; the starboard derrick was out, with beam and fishing gear hauled up and lying on the seabed under the derrick head; the starboard trawl net was empty; and the vessel's fish separator was sitting on the seabed close to the hull on the starboard side.

# 19 September 1991

4.1.6 Remote Marine Surveys were contracted by MAIB to survey the wreck with an ROV. Poor underwater visibility hampered the survey.

# 15 October 1991

4.1.7 The Inshore Survey Vessel CLEVELAND EXPLORER was chartered by MAIB as a platform from which to dive and operate ROVs. Remote Marine Surveys were contracted to supply divers and an ROV, and Seascan Southwest, an ROV. This survey was carried out with good underwater visibility, and provided some very useful evidence. (Summarised in the next section).

# 27 November 1991

4.1.8 Remote Marine Surveys were contracted by the next-of-kin to search for bodies. Again none was found. One of the divers reported that the galley clock had been recovered, showing a time of 1235. The paper from the track plotter was also recovered, but was seen to show the area off Brixham. The video plotter disc was recovered; it showed various fishing areas but not the operational track.

# 12/13/14 December 1991

4.1.9 CLEVELAND EXPLORER and Remote Marine Surveys were again contracted by MAIB to carry out ROV video surveys and diving operations. Due to very poor underwater visibility, little useful information was recorded. Divers with a low-light hand held camera reported that the starboard trawl beam was on the seabed under the derrick head.

# 4.2 Summary of Damage Found

- Stem forefoot bent round from starboard to port, damage extending downwards from just below the waterline for approximately 2 metres. (See Figure 4.1)
- Buckling of the hull plating amidships mainly on the starboard side and extending from deck level down to the bilge keel.
- Extensive deck damage in front of the winch housing.
- Guardrail buckled, forward starboard side of whaleback.
- Minor scrape marks, mainly on the port side.
- Fish separator detached from its mountings.
- Miscellaneous minor damage: bridge floodlights broken, compass out of gimbals, etc.
- 4.3 Other significant facts noted included:
  - Rudder hard to starboard.
  - Engine control at Full Ahead.
  - Wheelhouse clock stopped at 1237, galley clock at 1235. (See Figure 4.2)
  - Port derrick and fishing gear stowed, starboard derrick out.
  - Hatch to engine room from wheelhouse jammed partly open.
  - Galley drawers thrown out to starboard.
  - Bulwark freeing port hinged cover plates on both sides of the vessel jammed open.
  - Of those parts that were visible, there appeared to be no penetration of the shell plating.
  - There appeared to be no damage to the vessel's superstructure, masts or derricks.

#### 5. **DISCUSSION**

#### 5.1 The Channel Navigation Information Service (CNIS)

CNIS is operated by the British and French authorities through HM Coastguard at Langdon Battery, near Dover, and the French organisation CROSS at Cap Gris Nez. The Service broadcasts regular and frequent bulletins by VHF radio on matters of importance to mariners in the Strait of Dover and also responds to requests for specific information. Traffic in the Strait is monitored by radar and a continuous record of the radar picture is kept; an automatic plot is also maintained on magnetic tape but this only includes certain "acquired" targets as explained in the next paragraph.

Any vessel may report to CNIS by radio and certain ships (such as large tankers) are encouraged to do so; but reporting is voluntary, not mandatory. CNIS does not issue instructions to vessels in the Strait and is in no sense a traffic control system.

#### 5.2 CG Radar Records

Both the magnetic tapes and the raw radar video tapes for the night of 10/11 August were provided by HM Coastguard to assist the investigation.

The magnetic tape shows the tracks of echoes which have been acquired either on demand by the radar operator or automatically on passing through one of a number of pre-set acquisition zones. Once acquired, an echo is given a number and its track is automatically plotted until it leaves the area of radar coverage or it fades for some reason. The numbered references in this Report to ships and their tracks relate to echoes so acquired and traced on the automatic plot. None of these vessels had identified themselves. OCEAN HOUND was not "acquired", but study of the record of the radar picture (the raw radar video) has allowed her progress to be followed to the extent described in Section 3.

The radar records were examined and analysed by HM Coastguard and by the Defence Research Agency, Portsmouth, as well as by MAIB, and figure 5 shows the tracks of OCEAN HOUND and other vessels as reconstructed by MAIB following this scrutiny. It should be emphasised that despite the quantity of information recorded, the tracks shown cannot be considered as absolutely precise or comprehensive; the raw radar video in particular requires an appreciable element of qualitative assessment in its interpretation. With that caveat, however, the records do provide valuable evidence.

It can be seen that OCEAN HOUND, as mentioned in Section 3.9, did not (as seemed to be originally intended judging by the VHF call at 2218 hrs) enter the Inshore Zone but altered course to join the traffic within the SW lane. She also appears to have slowed down and indeed in the few minutes before her echo disappears is shown as being stopped - though as the tide was setting NE'ly at just over 2 knots she will in fact have been making way at about that speed

through the water. It is while she is apparently stopped that her echo seems to merge with that of ship number 648. It should be noted that this merging of echoes does not, in itself, demonstrate that collision or even a dangerously close passing occurred: the radar discrimination is not sufficiently precise for this, and echoes quite often appear to coincide on the radar when the ships themselves are passing at a safe distance.

5.3 Two tracks plotted early on 11 August should be referred to at this stage. One, given number 726, was that of a vessel heading NE'ly at a speed of about 8 knots, towards the Falls Light Vessel between 0100 hrs and 0248 hrs, when it disappears. The other, number 802, follows a normal track in the SW lane and can be seen to pass over the position where the wreck of OCEAN HOUND was found, at about 0440 hrs.

# 5.4 **Possible Causes of the Accident**

It will be seen that the first examinations of the wreck showed no significant damage. The implications of this and of the net of fish overside led to a very tentative first hypothesis. This was that, at some time after her echo was lost at 2337 hrs on 10 August, OCEAN HOUND had reversed her course and proceeded to the area of the Falls Light Vessel where she fished until sustaining an accident which brought about her capsize and sinking. This required a change of plan on board but there was no reason why such a change should not have been made, particularly as it is known that the vessel had fished in the region of the Falls before. Track number 726, steaming towards the Falls at about the right time and at a realistic speed for a trawler, could well have been OCEAN HOUND. The fatal accident might have involved encounter with the vessel tracked as number 802 at 0440 hrs, or might have been from an unrelated cause; the presence of the net of fish suspended from the starboard derrick clearly pointed to the vessel fishing before the accident and suggested that it occurred during recovery of the catch, when a vessel can be vulnerable to capsize. Clearly, however, this theory was far from proven and following further examination of the wreck it was discounted, mainly because of the discovery that the wheelhouse and galley clocks had stopped at 1237 and 1235 (ship's time) respectively; in other words, as BST was being kept on board, at virtually the same time as the echoes of OCEAN HOUND and of ship number 648 are seen to merge. The inference is that this did indicate either a collision or a very close quarters situation which led to the immediate capsize of OCEAN HOUND; she did not however immediately sink completely, but drifted, submerged or semi-submerged, to where her wreck was found. In that position she foundered, probably because she was struck by target number 802 at 0440 hrs, rolling over to the upright as she did so.

It is this which is believed to be almost certainly the true explanation.

# 5.5 Final Analysis of Evidence

- 5.5.1 As well as the clocks stopping, the rudder at hard a-starboard suggests a sudden emergency, as does the engine control at full ahead bearing in mind that the radar plot shows that speed had been much reduced in the previous few minutes.
- 5.5.2 The CG SAR computer, when fed with the 2337 hrs position and wind and tidal information for the relevant times, predicted the position of the wreck with remarkable accuracy.
- 5.5.3 It can be inferred from the radar record that OCEAN HOUND was overtaken at close quarters by a larger, faster vessel. This suggests the phenomenon of interaction between ships, as described in the Department of Transport's Merchant Shipping Notice No M.930, as a likely major factor. Briefly, when the bow of a larger, faster vessel comes up to the smaller, slower vessel, interaction forces between the two produce a tendency for the smaller vessel to sheer towards the larger one. Unless this is corrected at once, collision will occur.

Further, interaction causes an effective loss of stability, increasing the likelihood of the smaller vessel capsizing, sometimes with little or no physical contact between the ships. Several serious accidents have come about in this manner, resulting in the loss of vessels substantially larger than OCEAN HOUND. It is considered most probable that that is what happened here, and that at least most of the damage to OCEAN HOUND occurred at the time of the impact at 0440 hrs. There are several reasons for this conclusion:

- .1 The nature of the damage forward is consistent with the vessel being capsized at the time of impact rather than upright. While the damage to the forefoot could have been caused when upright by a bulbous bow, it is difficult to see how the upper part of a colliding vessel's bow could have damaged the rails without also causing other damage forward above the waterline.
- .2 The freeing port hinged cover plates are jammed open, presumably because the impact of collision caused buckling of the bulwarks. They are in near-horizontal and near-inverted positions, which indicates that the vessel was capsized with the weighted covers open when impact occurred.
- .3 The nature of the damage would imply a near head-on collision if the vessel had been upright at the time, and if this occurred in the encounter at 2337 hrs it would mean that OCEAN HOUND had come about on to a NE'ly heading just before impact. While the radar plot does not have sufficient discrimination to rule this out, it would have been a highly imprudent manoeuvre in the circumstances and one which, from evidence given both to MAIB and at the Inquest, would have been quite out of character for OCEAN HOUND's Skipper.

- .4 The damage to the deck includes extensive holing port and starboard forward of the winch housing, almost certainly caused by transfer of the impact load when the forefoot was struck. If this occurred at 2337 hrs, it is considered very unlikely that the vessel could have remained afloat long enough to drift to her eventual sinking position.
- 5.5.4 The presence of the net of fish when the wreck was first examined also requires consideration. At later inspections, the net was empty and the starboard derrick, reported by the first diver as topped nearly to the vertical, was resting on or just above the bulwark. This however does not lead to doubt as to the initial report: in the considerable period between dives the fish will have disintegrated, decomposed or been eaten by other fish, while a leak in the hydraulic system is most probably responsible for the derrick being lowered. The evidence of the diver who saw the net was very clear. A possible explanation is that when the Skipper came to the wheelhouse at 2300 hrs he took advantage of the change of watch, with both watches being on deck, to put out the starboard gear for a tow. After a short period the gear was recovered, and the stage of recovery indicated by the diver's report of the net suspended overside was reached at 2337 hrs, just as the collision or close contact occurred.

It should be stressed that this suggestion is put forward as no more than a possibility: the point was made strongly at the Inquest, and is accepted, that it is not common either to tow on one side only or for such a short period. But it is not impossible and no other reconstruction has been advanced which fits <u>all</u> the available evidence. In favour of the hypothesis, the net of fish over the starboard side would increase the likelihood of capsize if interaction occurred. In addition, the positions of the winch controls though not conclusive are consistent with a hauling operation; as is the apparent reduction in the vessel's speed.

- 5.5.5 To summarise, it is considered that:
  - .1 the ship designated number 648 was overtaking OCEAN HOUND in the SW traffic lane of the Dover Strait Traffic Separation Scheme and came so close to her that severe interaction between the two vessels came into effect. The Skipper of OCEAN HOUND recognised the danger and put the helm hard astarboard and the engine to full ahead to try to escape, but the interaction effect was too great. As a result of this effect, perhaps but not certainly coupled with physical contact, OCEAN HOUND capsized.
  - .2 It is reasonably likely, but not established positively, that OCEAN HOUND had been fishing and was hauling her starboard gear at the time of the accident.

- .3 Any physical contact at the time of capsize was slight and did not cause substantial damage. The vessel therefore did not sink but floated, in the capsized condition and probably largely under the surface of the water. She was carried by the tide to the position near the Falls Light Vessel where she was struck by ship number 802: it was this impact which caused most of the damage to the vessel and sank her.
- .4 Neither the inflatable liferafts nor the EPIRB were released when capsize occurred, in all probability because with the vessel inverted they were trapped. The EPIRB was released as OCEAN HOUND sank and operated correctly when it came to the surface. However, it is virtually certain that all on board had lost their lives when the initial accident took place.
- .5 It is inescapable that a very seriously inadequate lookout was being kept on board ship number 648. Accepting that actual collision may not have taken place, it is reasonably possible that the ship can be absolved of the even more serious act of deliberately continuing on passage without taking any steps to give help; but this supposes that OCEAN HOUND was not seen at any time. As the encounter must at the least have been extremely close, for this to be the case the standard of watchkeeping must have been grossly below that which is necessary. It is possible that excessive reliance had been placed on the radar (several accidents have demonstrated the danger of this) but with no evidence from the ship concerned, that can be no more than very tentative surmise.
- .6 Similar remarks do not apply to ship number 802, for with OCEAN HOUND largely submerged there will have been little or nothing to see, either visually or by radar.
- 5.5.6 It has not been possible to establish the identity of ships number 648 or 802 despite efforts not only by MAIB but also by others, notably the firm of Foot and Bowden, Solicitors to some of the next-of-kin.

# 6. FINDINGS

- 6.1 Taking into account all known factors, the most probable cause of the loss of mfv OCEAN HOUND was a collision or very close quarter situation with an unknown vessel causing the immediate capsize of OCEAN HOUND, and the tragic loss of her five crew.
- 6.2 The accident occurred at 2337 hrs GMT on 10 August 1991, in the South West bound traffic lane to the west of the Sandettie Light Vessel, in position 51°09'.4N, 01°37'.4E.
- 6.3 The unknown vessel did not stop or report the accident. It is possible that she was unaware of the collision; however, OCEAN HOUND's presence ought to have been recognized well before the event if a proper lookout was being kept.
- 6.4 The capsized OCEAN HOUND then drifted under the influence of tide and wind, to a position 0.7 miles to the North of the Falls Light Vessel, where she rolled over and sank, probably after being hit by another unknown vessel. With the trawler largely submerged the second vessel may well have been unaware of her presence.
- 6.5 OCEAN HOUND'S EPIRB commenced transmitting when the vessel sank. The Search and Rescue operation initiated by HM Coastguard when the signal was passed to them was properly conducted.
- 6.6 The position of the wreck is  $51^{\circ}18'.80N$ ,  $01^{\circ}48'.45E$ .

# 7. **RECOMMENDATIONS**

7.1 At the Inquest, the Jury in returning Open Verdicts recommended the fitting to ships of some form of electronic identification similar to transponders which are fitted to aircraft. The potential value of this recommendation is fully recognised, but it is also appreciated that its full implementation requires international agreement and is very much a long-term project. For the particular case of Dover Strait, it would be possible for Britain and France jointly to go some way towards meeting the spirit of the Jury's recommendation by a relatively simple development of the existing reporting scheme.

# **Recommendation** 1

As a long-term objective, the provision of electronic identification systems for ships should be explored through the International Maritime Organization. Meanwhile, it is recommended that the authorities in Britain, in conjunction with those in France, review the existing voluntary reporting arrangements for vessels using the Dover Strait Traffic Separation Scheme, and give serious consideration to:-

- (a) extending the scheme to cover all vessels in transit through the Strait required to carry VHF, and
- (b) making it mandatory.

This Recommendation is addressed to Marine Directorate of the Department of Transport.

7.2 It will be apparent that the cause of this accident must have been failure of lookout, particularly in the vessel which encountered OCEAN HOUND at 2337 hrs on 10 August.

# **Recommendation 2**

It is strongly recommended that every effort be made to bring the circumstances of the accident as widely as possible to the notice of all those charged with the conduct of ships so as to stress the vital importance of keeping a thorough lookout at all times by every available means.

This Recommendation is addressed to Marine Directorate of the Department of Transport and also to the International Chamber of Shipping, the International Federation of Ship-Master's Associations and to the Shipping and Fishing press whose co-operation is sought in its implementation.

7.3 While there is no evidence that those below deck at the time of capsize tried to use the emergency escape hatch, divers have since attempted to open this hatch without success.

# **Recommendation 3**

It is recommended that during the mandatory surveys of fishing vessels the use and operation of emergency escapes from below deck should be practically demonstrated.

This Recommendation is addressed to Marine Directorate of the Department of Transport.

7.4 In this and some other recent cases, the distress of next-of-kin has been augmented by delay and difficulty in their being able to obtain formal evidence of death.

# **Recommendation 4**

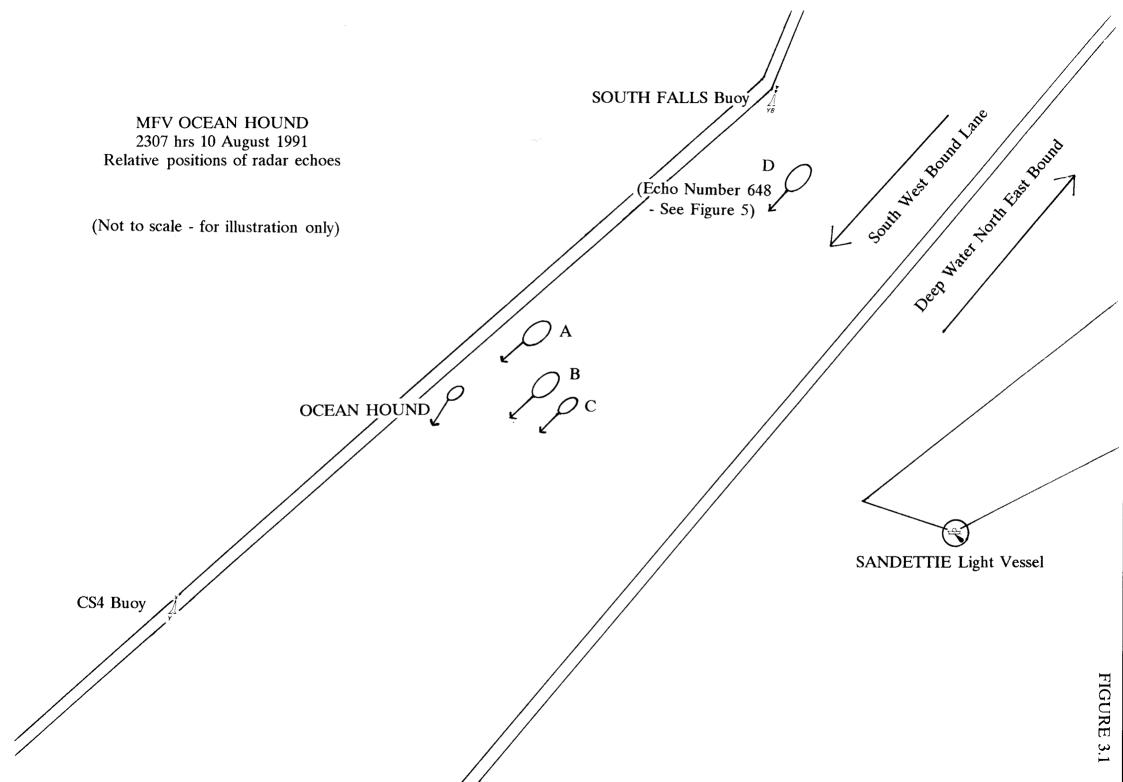
It is recommended that the procedures be reviewed so as to enable an interim certificate of death to be issued as soon as those investigating the accident are prepared to certify that they are satisfied beyond reasonable doubt that death has in fact taken place.

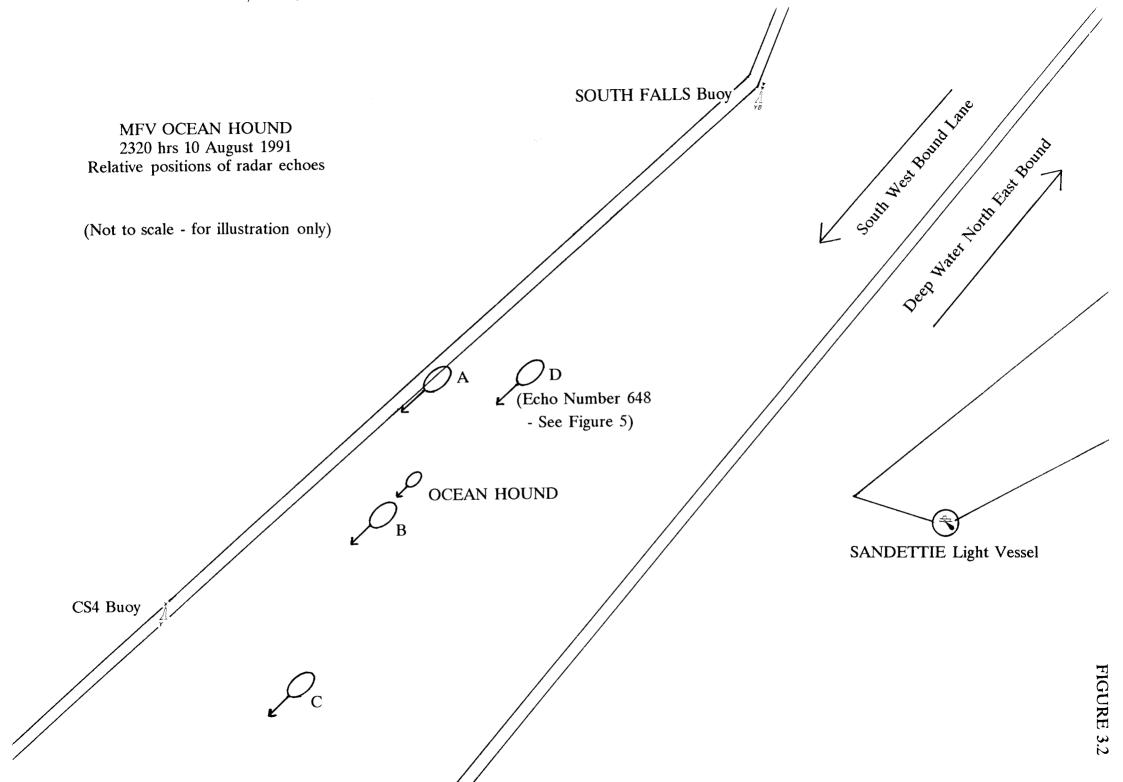
This Recommendation is addressed to Marine Directorate of the Department of Transport.



FV OCEAN HOUND at Sea







South West Bound Lane SOUTH FALLS Buoy Deep Water Loth Fast Bound MFV OCEAN HOUND 2337 hrs 10 August 1991 Relative positions of radar echoes (Not to scale - for illustration only) D (Echo Number 648 - See Figure 5) R OCEAN HOUND SANDETTIE Light Vessel CS4 Buoy FIGURE 3.3

# FIGURE 4.1



FOREFOOT DAMAGE

FIGURE 4.2



WHEELHOUSE CLOCK SHOWING 1237

