Report on the investigation of

a collision between

the Bahamian cargo ship

Union Arbo

and the United Kingdom fishing vessel

Philomena

about 10 miles south of Newlyn in Cornwall

on 2 September 1999

Marine Accident Investigation Branch
First Floor
Carlton House
Carlton Place
Southampton
SO15 2DZ

Report No 19/2000

Extract from

The Merchant Shipping

(Accident Reporting and Investigation)

Regulations 1999

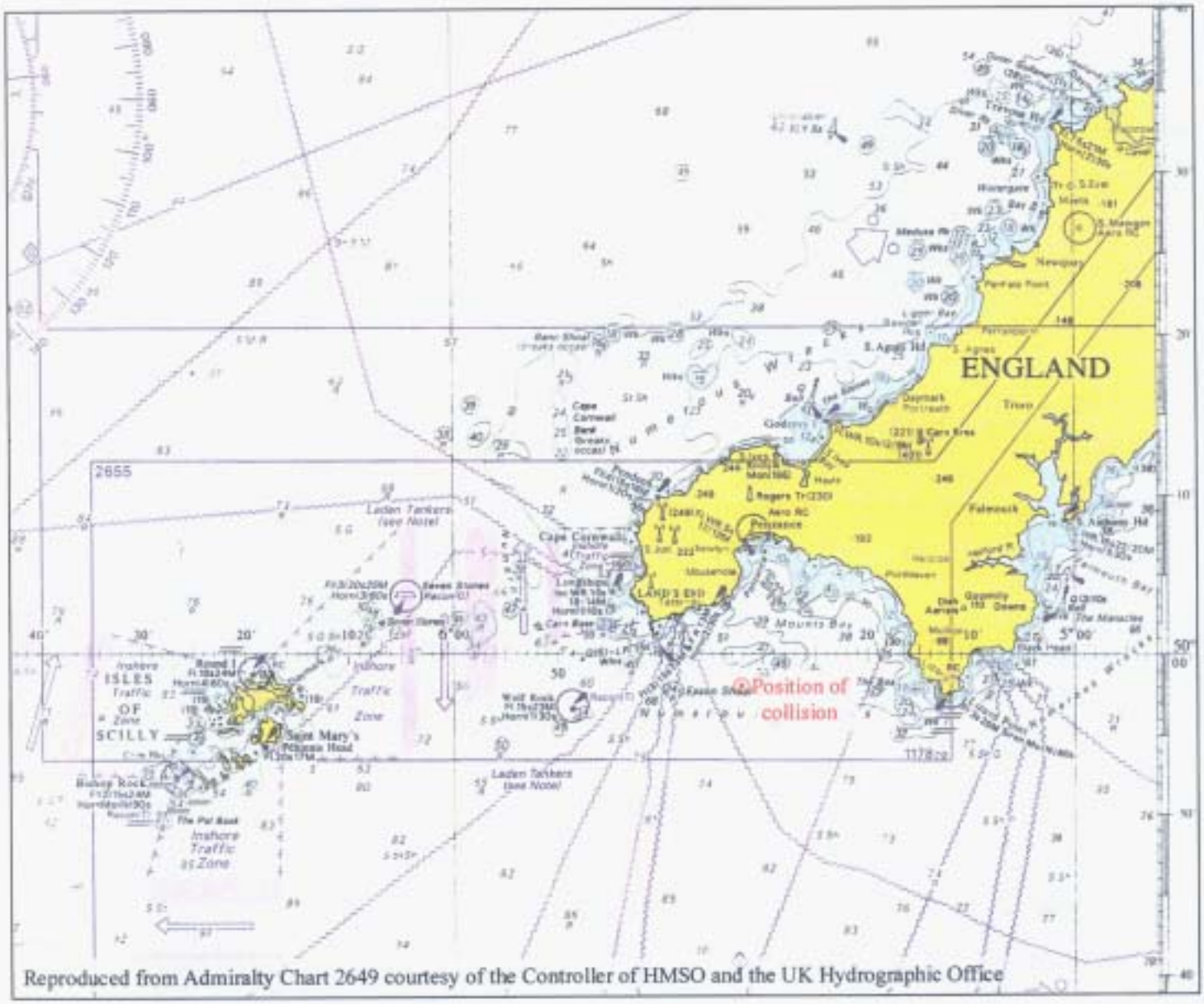
The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.

CONTENTS

GLOSSARY OF ABBEVIATIONS AND ACRONYMS

DGPS	Differential global positioning system
ETA	Estimated time of arrival
GPS	Global positioning system
kW	kilowatt
m	metre
MAIB	Marine Accident Investigation Branch
MCA	Maritime and Coastguard Agency
MF	Medium frequency
Satcom	Satellite communications
teu	Twenty-foot equivalent units
UK	United Kingdom
UTC	Universal co-ordinated time
VHF	Very high frequency


SHETLAND ISLES
Foula
ORKNEY ISLANDS
Fair Isle
Sumburgh Hd
Viking Bank
Rosemary Bank
Sule Skerry
Sule Stack
Duncansby Hd
Cape Wrath
Butt of Lewis
Flannan Is
HEBRIDES
OUTER WESTERN ISLES
S. Kilda
Anton Dohrn Seamount
ODAS RARH
Barra Head
Skerryvore
Moray Firth
Kinnaird Head
Aberdeen
SCOTLAND
NORTH SEA
OIL AND GAS
(see Note)
Oban
Isle of May
Edinburgh
Glasgow
ODAS K4
Tory I
RC
Londonderry
NORTHERN IRELAND
Belfast
North Channel
Newcastle
Tynemouth
Middlesbrough
Dogger Bank
Isle of Man
IRISH SEA
Flamborough Head
Hull
REPUBLIC OF IRELAND
DUBLIN
Liverpool
ENGLAND
Inner Dowsing
Great Yarmouth
Limerick
WALES
Waterford
Tuskar Rk
Cork
Mine Hd
Saint George's Channel
Milford Haven
Felixstowe
Orfordness
Fastnet Rk
Cardiff
Bristol
LONDON
Bristol Channel
Lundy
Taunton
Southampton
Dover
Dungeness
Calais
Cap Gris Nez
CELTIC SEA
Labadie
Trevose Head
Falmouth
Plymouth
S. Catherine's Pt
ENGLISH CHANNEL
Isles of Scilly
Bishop Rock
Wolf Rock
Location of accident
Pointe de Barfleur
Cap d'Antifer
Le Havre
Cherbourg
CHANNEL ISLANDS
PARIS
Great Sole Bank
Little Sole Bank
Ile d Ouessant
RC
Brest
Lorient
ODAS 24 08
ODAS BRITTANY
Reproduced from Admiralty Chart 4014 by permission of the Controller of HMSO and the UK Hydrographic Office



Reproduced from Admiralty Chart 2649 courtesy of the Controller of HMSO and the UK Hydrographic Office

SYNOPSIS

At about 0912 (UTC + 1) on 2 September 1999, the UK registered fishing vessel *Philomena* collided with the Bahamian registered cargo ship *Union Arbo*. The Marine Accident Investigation Branch (MAIB) was informed of the accident at 1040 on the same day. Captain P Kavanagh carried out the investigation.

The fishing vessel was on passage from the fishing grounds to Newlyn, heading north-north-east and making about 9.5 knots. A deckhand had been given the navigational watch, while the skipper had retired to his cabin, which was immediately aft of the wheelhouse. The deckhand took two telephone calls and then preoccupied himself with cleaning electrical instruments. A ship appeared on his starboard bow and subsequently tried to take avoiding action.

The cargo ship, on passage from Germany to Ireland, was steering 279° on the gyro compass and making about 7 knots. The master of the ship observed that two fishing vessels on his port bow were on courses crossing ahead of his vessel. The first fishing vessel altered course for him and passed around his stern. He expected the second fishing vessel, after a delay, to do the same so as not to approach too close to the first. However, the second fishing vessel kept her course and speed. The master then took avoiding action but the fishing vessel's stem collided with his port bow. The fishing vessel's derrick fell down and pierced the side of the ship, causing a hole in a ballast tank and the ship to consequently list to port, which was rectified by ballasting the opposite tank.

Both vessels made port without further incident.

Philomena's deckhand did not meet his obligation under the *International Regulations for Preventing Collisions at Sea* to keep his vessel out of the way of *Union Arbo*. The master of *Union Arbo* did not take appropriate action early enough to best avoid collision when it became apparent to him that *Philomena* was not giving way.

The MAIB has no safety recommendations to make at this time.

Philomena in Penzance harbour

Union Arbo alongside in Falmouth

PARTICULARS OF VESSELS AND ACCIDENT

VESSEL DETAILS

Name	:	*Philomena*	*Union Arbo*
Registered owner	:	TN Trawlers	Union Transport Group
Port of registry	:	Troon (TN37)	Nassau
Flag	:	United Kingdom	Bahamas
Classification Society	:	-	Germanischer Lloyd
Built	:	1970 in Holland	1984 in Germany
Construction	:	Steel	Steel
Type	:	Beam trawler (scallops)	General cargo
Length overall	:	30.57m (registered length 27.3m)	82.48m
Gross tonnage	:	165.0	1522
Engine power (kW)	:	543	441
Service speed	:	10 knots	10.75 knots

ACCIDENT DETAILS

Time and date	:	0912 (UTC + 1) 2 September 1999
Location	:	10 miles south of Newlyn, Cornwall
Persons on board	:	Five on the fishing vessel and six on the cargo ship
Injuries	:	None
Damage	:	Damage to the stem of the fishing vessel. Damage to the cargo ship's port bow and to No 3 port ballast wing tank, which was holed.

SECTION 1 - FACTUAL INFORMATION

1.1 NARRATIVE OF EVENTS

All times are UTC + 1.

At 0600 on 26 August 1999, *Philomena* landed her catch at Newlyn and sailed at 1000 for the fishing grounds, which were about 32 miles south of Newlyn. The vessel had six days of reasonable fishing and in fine weather. At 0545 on 2 September, the skipper finished the fishing operations. The scallops were emptied from the dredges and the beams were secured. The skipper called a deckhand to the wheelhouse to take the navigational watch. Then the skipper went on deck, to carry out some welding repairs to the fishing gear, after which he made some engine room checks.

At about 0645, the skipper returned to the wheelhouse and told the deckhand to call him when the vessel was about 10 miles from Newlyn. He estimated this would be at about 0900. The fishing vessel was on a north-north-east heading, and making a speed of about 9.5 knots. The skipper retired to his bunk, which was in his cabin immediately behind the wheelhouse.

Both of the radar sets (one on the 6-mile range scale and the other on the 3-mile range scale) and both electronic chart systems were in operation **(see section 1.4.3)**.

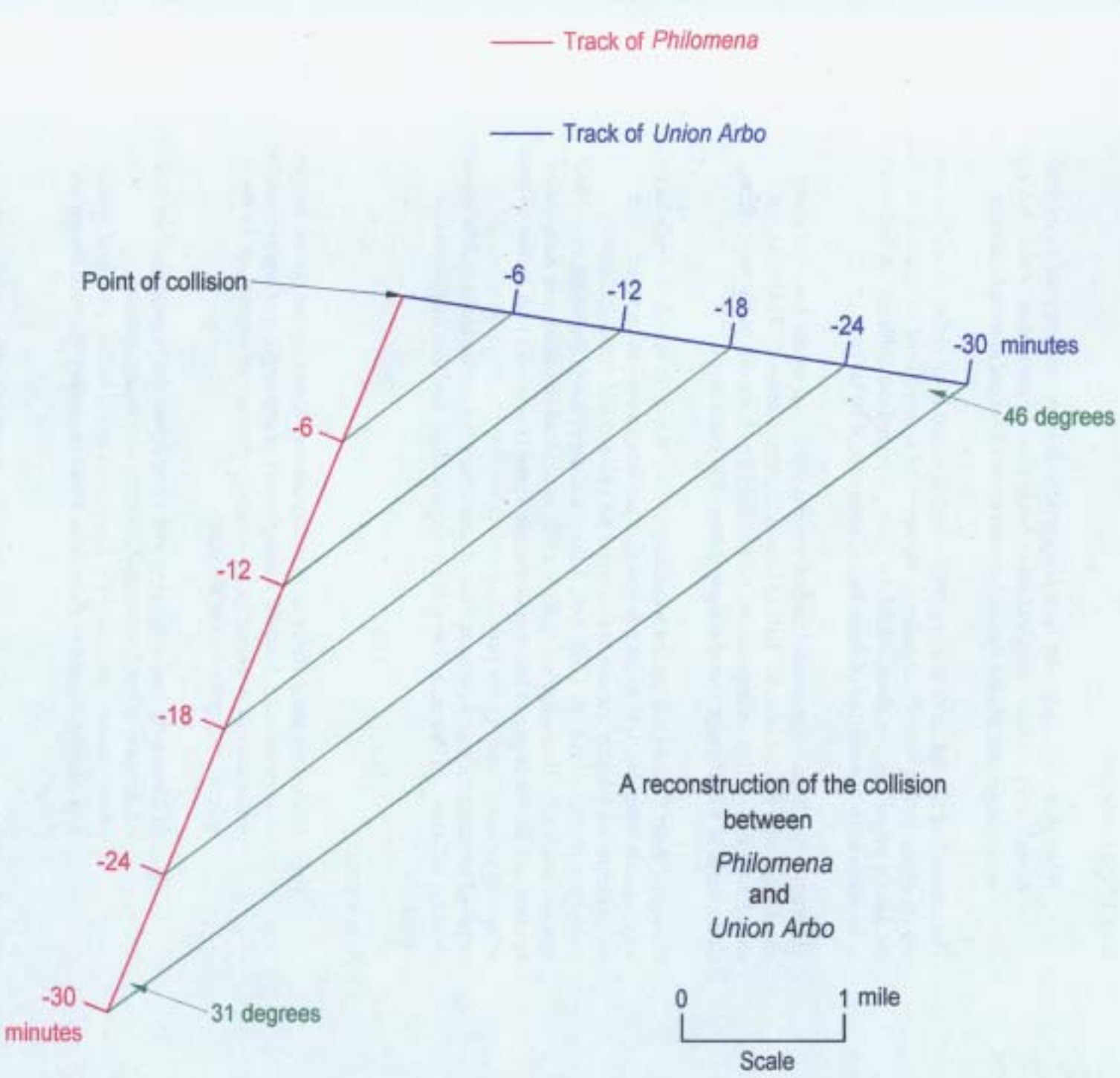
In the early hours of 30 August, *Union Arbo* left Leer, in Germany, loaded with 1648 tonnes of rape seed, for New Ross in Ireland. At about 0600 on 2 September, the master took over the navigational watch from the chief officer, after having had adequate sleep. At about 0707, when passing Lizard Point, the master altered course to 281° (True) but set 279° on the gyrocompass. In the hour before the collision, the ship was making a speed of about 7 knots.

He was using one of the radar sets on the 6-mile range scale, which he occasionally changed to the 12-mile range scale. The radar set was not gyro stabilised **(see section 1.3.3)**.

There was a pelorus on each bridge wing.

On the radar set the master saw two echoes on the port bow. He looked at the vessels through binoculars and saw that they were two fishing vessels. From their stowed gear, he deduced that they were not fishing, were on passage making about 10 knots and it was a crossing situation. The nearer and most easterly of the fishing vessels altered course to starboard for *Union Arbo* and passed around her stern. The master expected the second fishing vessel to follow the first and he waited for her to do so. He then realised that the fishing vessel was, in fact, standing on.

At about 0845, the deckhand on board *Philomena* received a telephone call from the owner, who was told the vessel would arrive in Newlyn about an hour later. The deckhand woke the skipper to relay the telephone conversation. Five minutes later the skipper's fiancée telephoned and the deckhand took the telephone on the extension lead through to the skipper, who was still in his bunk.


Track of *Philomena*
Track of *Union Arbo*
Point of collision
-6
-12
-18
-24
-30 minutes
46 degrees
-6
-12
-18
-24
-30
minutes
31 degrees
A reconstruction of the collision between *Philomena* and *Union Arbo*
0
1 mile
Scale

The deckhand returned to the front of the wheelhouse and busied himself cleaning the electronic instruments, fixed to the deckhead. While engaged in this task he saw the bow of a ship on the starboard bow at a very close range. Because the controls were close to hand, he was able to throttle back the engine speed, sound the whistle, disengage the automatic helm and turn the wheel to port very quickly.

The skipper heard the deckhand shouting and the engine slowing down. He got out from his bunk immediately but was thrown to the deck when the two vessels collided. He picked himself up, entered the wheelhouse and put the engine control to full astern.

Union Arbo's master turned the rudder to hard-to-starboard and the engine to full astern. He sounded a prolonged blast on the whistle and called on the VHF radio channel 16. However, *Philomena*'s stem collided with *Union Arbo*'s port bow. The impact caused the fishing vessel's starboard derrick to fall down, and as her head was turning to port, the head of the derrick pierced the ship's hull just beneath the waterline, amidships, in way of No 3 ballast tank on the port side.

The two vessels contacted each other on VHF radio channel 16, and the master of *Union Arbo* said that his vessel seemed to be taking water. Then Falmouth Coastguard intervened and *Philomena*'s skipper said that his vessel had been in collision with *Union Arbo*. He gave his position as (latitude) 49° 58.'060 north and (longitude) 005° 34.'160 west, and also said that his vessel was damaged but not taking in water, there were six people on board, the other vessel was listing and that he was returning to Newlyn with an ETA of 1045. While the fisheries protection vessel *Verifier* escorted *Philomena* back to Newlyn, the damage to the fishing vessel was seen to be restricted to the stem and above the waterline.

Union Arbo developed a port list, due to flooding of No 3 port ballast tank, but this was corrected by ballasting the starboard tank. The cargo ship *Lady Elsie* stood by the casualty. *Union Arbo* told the coastguard that she was heading for Penzance. However, before she reached the port, it was decided, because the ship's situation was stable, she should proceed to Falmouth.

At 0956 *Philomena* was alongside in Newlyn. At 1530 *Union Arbo* was alongside in Falmouth.

1.2 ENVIRONMENTAL CONDITIONS

The weather was fine, with north-easterly winds of force 1 to 2. The visibility was good with slight seas and a low swell. It was daylight.

The tidal stream was setting easterly at the time of the accident. High water at Falmouth was at 1028 and was between springs and neaps.

1.3 *UNION ARBO*

1.3.1 The ship

The vessel is a conventional cargo ship with one hold and strengthened to carry heavy cargoes. She is ice strengthened and can carry 80 teu containers. She has one propeller and a bow thruster. The bridge can be lowered for passing under bridges.

1.3.2 The crew

The crew consisted of the master, the chief officer, the chief engineer and three able seamen, one of whom acted as cook.

The master was 66 years old at the time of the accident. He began his sea-going career on inshore fishing vessels when he was 14 years old, and joined the Royal Navy when he was 16. He returned to fishing in 1958 as deckhand and then mate/skipper on small inshore trawlers. In 1980 he joined the Merchant Navy as an able seaman on coastal vessels. He passed the Class 5 certificate of competency examination in March 1982, and then the command endorsement in March 1991, immediately after which he was promoted to master. At the beginning of 1997, after having served on *Union Arbo*, he went into partial retirement, by taking relief-master work on a casual basis for between 4 and 5 months each year. His most recent ship was *Union Arbo* which he joined on 11 August 1999

The Bahamian safe manning certificate for the ship called for a master and a mate (one of which had to be a licensed marine engineer operator) and three able seamen. Therefore, the vessel was being operated with manning in excess of the requirements of the certificate.

1.3.3 Navigation equipment and controls

(See photograph opposite)

The ship was equipped with the following:

Furuno GPS Navigator;

Swiss radar for use in river navigation only and calibrated in kilometres;

Ratheon radar operated in the unstabilised, ship's head up mode;

Plath gyro compass, located in the engine room with a repeater on the bridge;

rate of turn indicator; and

whistle button beside the Ratheon radar.

The engine could be controlled directly from the bridge, with two controls in the wheelhouse and one on each bridge wing.

Union Arbo - navigation equipment and controls

There were five tillers - three in the wheelhouse and one on each bridge wing.

One Furuno VHF radio set was beside the Ratheon radar, and a Hagen VHF radio set was on the port side of the bridge.

1.3.4 Damage

(See photographs opposite)

The bulwarks around the forecastle were crumpled, and there were dents in the port side hull plating below the forecastle deck, just above the anchor box. The hull amidships near the load waterline had a 2m long by 0.3m deep hole, in way of No 3 port ballast tank.

1.4 *PHILOMENA*

1.4.1 The fishing vessel

Philomena was bought by the present owner in November 1998 and had been previously under the Isle of Man flag. She is a conventional, Dutch built beam trawler, rigged with dredges to catch scallops. From November to July she trawls in the Irish Sea, landing at Workington. For the rest of the year, she trawls in the western approaches to the English Channel, landing either at Newlyn or Plymouth.

She has one propeller and the engine can be controlled directly from the wheelhouse.

1.4.2 The crew

The skipper was 24 years old at the time of the accident. He first went to sea in 1989 as a deckhand serving on a scalloper sailing out of Kirkudbright. After 3 years, he was employed by the present owner and has been ever since. He had sailed on *Mattanja* before joining *Philomena* on 20 April 1999. He was promoted to skipper in May 1999. At the beginning of 1999 the skipper attended college and took his Class 2 (fishing) certificate of competency examinations. At the time of the accident he had still to complete his electronic navigation systems course/certificate but was given a dispensation from MCA's Aberdeen Marine Office to sail as skipper on *Philomena*. The dispensation was valid from 20 May 1999 to 31 July 1999.

The deckhand was 39 years old at the time of the accident. He first went to sea in 1979 as deckhand serving on scallopers sailing out of Kirkudbright. He worked on fishing vessels until about 1993 when he took employment ashore. In 1998 he returned to fishing and served on *Philomena* and *Mattanja*. He had been on *Philomena* for about 3 months before the accident. He had attended the mandatory sea survival and fire fighting courses in the early 1990s.

There were three more deckhands on board, one of whom was the owner's son.

Detail of the damage to the port bow

Detail of damage amidships

A fishing vessel of her length, was required by *The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1984*, to have deck officers on board holding Class 2 and Class 3 (fishing) certificates of competency. At the time of the accident the skipper's dispensation had expired. Therefore, she was short of a Class 2 and a Class 3 certificated officer. As her engine was only 543kW, she was not required to have a qualified engineer officer on board. The regulations also require the navigational watch to be undertaken by a person holding an appropriate certificate of competency.

(Note: Following the accident the MCA detained the vessel because:

> *No holders of valid Deck Certificates of Competency are on board and the vessel is prohibited from going to sea undermanned.)*

1.4.3 Navigation and communication equipment

The fishing vessel carried the following navigational equipment:

two Furuno radars (types RDP 007 and RDP 080) - both not gyro stabilised;

two GPS sets (Valsat 2008 M2 and Furuno GP 70);

two DGPS sets (*LMX* 400 and Furuno GP 35); and

two plotters, Fishmaster (with Transas electronic charts) and Trax (with Livechart electronic charts).

The communication equipment consisted of:

three VHF radio sets;

two Skanti MF radio sets;

one satcom C set; and

two Motorola cellphones.

1.4.4 Damage

(See photograph opposite)

The extreme forward part of the whaleback, above the main deck, was crumpled towards aft for 1 - 2m.

Detail of damage to *Philomena*

1.5 STATUS OF THE VESSELS WITH REGARD TO THE COLLISION REGULATIONS

Philomena was on passage between the fishing grounds and her landing port and was not fishing. Under the ***International Regulations for Preventing Collisions at Sea*** (Collision Regulations) she was a power-driven vessel (as was ***Union Arbo)*** and was not restricted in her ability to manoeuvre. ***Philomena*** was on a northerly heading, and ***Union Arbo*** was on a westerly heading, approaching each other in a crossing situation as defined by Rule 15. ***Union Arbo*** was on ***Philomena's*** starboard bow, and under the Collision Regulations ***Philomena*** was required to keep out of the way of ***Union Arbo,*** the stand-on vessel.

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations, if any, with the aim of preventing similar accidents occurring again.

This section will examine how these two vessels collided in good visibility and weather.

2.2. THE COLLISION

2.2.1 *Philomena*

Many fishing vessels around the coast of the United Kingdom place deckhands on navigational watches when fishing and on passage, even when there is both a qualified skipper and mate on board. The deckhands do not, normally, have any formal education in navigation or in collision avoidance, but rely on experience, in-house training and relatively sophisticated navigational equipment.

In the case of a vessel of 24m or more in length, such as *Philomena*, *The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1984* required the navigational watch to be undertaken by a person holding an appropriate certificate of competency.

The skipper employed the deckhand involved in the collision to be on navigational watch, with another deckhand to relieve him. The former deckhand had much experience in watchkeeping **(see section 1.4.2)** and the latter had attended college, where he learned navigation and the collision regulations. The skipper told both that if they were in doubt, if visibility reduced, or if a ship approached too close, they should call him.

In the lead up to the collision, the deckhand became preoccupied with receiving telephone calls and in cleaning the navigational instruments.

There was a duck-board in the deck space in front of the wheelhouse chair **(see first photograph opposite)**.

When standing on this, a watchkeeper is only just able to see the horizon through the wheelhouse windows **(see second photograph opposite)**. He can see the horizon by sitting in the chair or standing aft of it. Periodically he should move around to see past the port and starboard samson posts, which slightly impede visibility.

While the deckhand cleaned the instruments, he was not paying attention to the radar sets, nor was he able to see around the horizon. The ship's appearance came as a

The duck-board in front of the wheelhouse chair

The view to starboard when standing on the duck-board

surprise to him. Had he been keeping a proper and sustained lookout, he would have noticed the approach of the ship much earlier.

With regard to keeping a proper lookout, Rule 5 of the Collision Regulations states:

> *Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances so as to make a full appraisal of the situation and of the risk of collision.*

The reconstruction of the collision **(see opposite)** shows that *Union Arbo* was about three points on the starboard bow of the fishing vessel. Because both vessels had not altered from their tracks and they eventually collided, the compass bearing remained steady. As stated in section 1.5 above, this was a crossing situation as defined by Rule 15, which states:

> *When two power drive vessels are crossing so as to involve risk of collision, the vessel which has the other on her starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.*

The deckhand did not keep a proper lookout and was unaware of the approach of the ship. Thereby, he did not appraise himself of the developing situation, and because a risk of collision was evident, he did not take early and substantial action to keep well clear as directed by Rule 16.

It is uncertain to what degree his not holding a Deck Officer certificate of competency adversely affected his vigilance and maintenance of a proper lookout.

There were no other mitigating circumstances in which either the deckhand, or the master of *Union Arbo* was constrained in taking avoiding action, such as stress of adverse weather, other traffic, or nearness of navigational hazards.

2.2.2 *Union Arbo*

The master had ample sleep during the passage from Germany, and was not suffering from fatigue.

While he did not make a systematic appraisal to ascertain whether the two crossing vessels were on collision courses, he correctly assumed that they were. From the reconstruction of the collision, the fishing vessels were about four points on his port bow. He expected that, under the Collision Regulations, they would alter course for his ship; and the first vessel did so. Because the fishing vessels were relatively close to each other he also expected the second vessel to wait for the first vessel to alter course and then follow after a suitable interval so as not to get too close. However, the master of *Union Arbo* waited too long to take his own avoiding action and the collision occurred.

Rule 17 (a) (ii) gives the actions to be taken by the stand-on vessel:

*The latter vessel **may** however take action to avoid collision by her manoeuvre alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.*

Rule 17 (b) continues:

*When from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she **shall** take such action as will best aid to avoid collision.*

The master had the option of altering course and/or speed at an earlier time if he was unsure of the fishing vessel's intentions. However he was required to take action when the fishing vessel's action alone would not have prevented the collision. A decision has to be made as to when either of these two actions should be taken.

The master had been in the coastal trade for some years, and would have had many encounters with fishing vessels. He had been a fisherman himself. Therefore, he would have known that fishing vessels, when obliged to keep out of his way, often alter course at a later stage and at a closer range than other ships.

However, Rule 17 does not tell the watchkeeper on a stand-on vessel, in a satisfactory way, exactly when his right to take action changes into an obligation to act. The watchkeeper on a highly manoeuvrable stand-on vessel could avoid collision by complying strictly with Rule 17(b), but, if the stand-on vessel is the larger vessel and less manoeuvrable, then adhering to Rule 17(b) could lead to collision in many cases. In other words, the larger or less manoeuvrable vessel is obliged to act earlier. This is a "special circumstance" under Rule 2(a) and means that the stand-on vessel is required to take action at a distance, that is, one where her action alone will be enough to avoid collision. In this case *Union Arbo* was the larger and less manoeuvrable vessel.

Rule 2 states:

(a) Nothing in these Rules shall exonerate any vessel, or the owner, master, or crew thereof, from the consequences of any neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

(b) In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules necessary to avoid immediate danger.

The watchkeeper on the stand-on vessel can be faced with the dilemma as to whether the give-way vessel will take avoiding action or not. If so, the watchkeeper should take into consideration the special circumstances of the situation, such as the differences in the manoeuvrability and size of vessels, nearby traffic and navigational hazards, and decide when he should take his/her own avoiding action.

SECTION 3 - CONCLUSIONS

3.1 FINDINGS

3.1.1 General

1. A collision occurred between the UK fishing vessel *Philomena* and the Bahamian registered cargo ship *Union Arbo* at about 0912 (UTC + 1) on 2 September 1999, in a position approximately 10 miles south of Newlyn. [1.1]

2. The weather was fine and the visibility good. [1.2]

3. Both vessels had ample sea room in which to manoeuvre. [2.2.1]

3.1.2 *Philomena*

1. The fishing vessel was on passage from the fishing grounds in the western approaches to the English Channel to her landing port of Newlyn. [1.1]

2. The skipper had handed over the navigational watch to one of the deckhands, while he went to his bunk, which was in his cabin immediately behind the wheelhouse. [1.1]

3. The skipper had told the deckhand he should be called if he was in doubt, if a ship came too close, or if he met reduced visibility. [2.2.1]

4. From the fishing grounds to the collision point, the fishing vessel had been on a north-north-easterly course and was making a speed of about 9.5 knots. [1.1]

5. *Union Arbo* was about three points on the fishing vessel's starboard bow. [2.2.1]

6. In the time leading up to the collision the deckhand became preoccupied with taking telephone calls and cleaning navigational instruments. [1.1, 2.2.1]

7. While carrying out the latter job and standing on a duck-board, he would have only just been able to see the horizon. [1.1, 2.2.1]

8. It was not until the cargo ship was close to the fishing vessel, that the deckhand saw her visually. [1.1, 2.2.1]

9. He attempted to take avoiding action, but it was too late and the fishing vessel's stem collided with the cargo ship's port bow. [1.1, 1.4.4]

10. The fishing vessel's stem was damaged, but her watertight integrity remained intact and she was able to reach Newlyn without further incident. [1.1]

11. The fishing vessel's manning was short of a Class 2 and a Class 3 certificated officer. [1.4.2]

12. In accordance with *The Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1984,* a person holding an appropriate certificate of competency should have kept the navigational watch. [1.4.2]

3.1.3 *Union Arbo*

1. The fully laden cargo ship was on passage from Leer in Germany to New Ross in Ireland. [1.1]

2. In the time leading up to the collision, the ship was steering 279° by gyro compass, to make good her true course of 281°, and making good a speed of about 7 knots. [1.1]

3. The master, who had been adequately rested, took charge of the navigational watch at about 0600. [1.1, 2.2.2]

4. The operational radar was on the 6-mile range scale, which the master occasionally changed to 12 miles. [1.1]

5. He observed two fishing vessels on his port bow, which were crossing. [1.1, 2.2.2]

6. He deduced that the two fishing vessels were on collision course and that they were the give-way vessels. [1.1, 2.2.2]

7. The first of the two fishing vessels altered course for *Union Arbo*, but the second kept her course and speed. [1.1, 2.2.2]

8. The master expected the second fishing vessel to follow the first after a short time. [1.1, 2.2.2]

9. When he realised that the second fishing vessel was not going to take avoiding action, the master took such action himself. [1.1, 2.2.2]

10. The action did not prevent the collision. The ship's port bow was damaged and the fishing vessel's derrick pierced the ship's hull amidships. [1.1, 1.3.4]

11. The latter damage allowed water to flood a ballast tank, which resulted in a port list. The list was rectified by pumping water ballast into the opposite side tank. [1.1, 1.3.4]

12. Initially the ship made for Penzance but was later diverted to Falmouth where she berthed without further incident. [1.1]

13. The ship was being operated in excess of the requirements of her Safe Manning Certificate. [1.3.2]

3.2 CAUSES

3.2.1 *Philomena*

The deckhand of *Philomena* did not meet his obligation under the Collision Regulations to keep out of the way of *Union Arbo*. [2.2.1]

3.2.2 *Union Arbo*

The master of *Union Arbo* did not take appropriate action early enough to best avoid collision when it became apparent to him that *Philomena* was not taking appropriate action. [2.2.2]

3.3 CONTRIBUTORY CAUSES

1. The deckhand was preoccupied in taking telephone calls and in cleaning navigational instruments, and was not keeping a proper lookout. [1.1, 2.2.1]

2. It is uncertain to what degree the deckhand's lack of a certificate of competency adversely affected his vigilance towards maintaining a proper lookout. [2.2.1]

3. The master delayed his avoiding action because he erroneously assumed that *Philomena* would follow, after a delay, the avoiding action of the first fishing vessel so that the two fishing vessels would not approach too close to one another. [2.2.2]

SECTION 4 - RECOMMENDATIONS

The MAIB has no safety recommendations to make at this time.

Marine Accident Investigation Branch
June 2000