

**Departmental investigation
into the collision between
the Australian fishing vessel
ESTER J
and a bulk carrier
in Bass Strait at about 0215
Eastern Australian Summer Time
on 26 November 1996**



Report 104



Navigation Act 1912
Navigation (Marine Casualty) Regulations
into the collision between the Australian fishing vessel
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Eastern Australian Summer Time
on 26 November 1996

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The Investigation into marine casualties occurring within the Commonwealth's jurisdiction are conducted under the provisions of the Navigation (Marine Casualty) Regulations, made pursuant to sub section 425 (1) (ea) and 425 (1AAA) of the *Navigation Act 1912*. The Regulations provide discretionary powers to the Inspector to investigate incidents as defined by the Regulations. Where an investigation is undertaken the Inspector must submit a report to the Secretary of the Department. It is Departmental policy to publish such reports in full as an educational tool.

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Summary

Ester J, a steel hulled fishing vessel, based in San Remo, Victoria, had been fishing for shark about 50 miles south of Port Phillip during the 25 November 1997, with a crew of three aboard.

At about 0100 Eastern Australian Standard Time on 26 November, the Skipper anchored the vessel in about 75 m of water in position 39° 7.88' South 145° 19.25' East, about 33 miles south of Phillip Island. The vessel switched on its anchor light and the Skipper and one of the deck hands went to bed, leaving one deck hand on watch.

At or a little after 0200, the deck hand noticed the lights of a ship approaching from an easterly direction. He realised that the vessel was bearing down towards Ester J and he immediately called the Skipper. The Skipper started the fishing vessel's engine and called the unidentified vessel on channel 16 VHF, with no response. There was no time to weigh anchor or cut the cable, so he put the engine full astern, but the two vessels collided at about 0215.

The fishing vessel sustained damage to the port side. The large vessel did not stop or make any attempt to call Ester J. A quick inspection of the damage showed the vessel was not in immediate danger of sinking.

Ester J's Skipper called Melbourne Maritime Communications Centre on the radio frequency 4125 kHz, reporting the incident. He then called his home by mobile telephone.

Nobody was injured and no pollution resulted from the collision.

The hull remained watertight and the engine was operational, so the Skipper set course for San Remo, where the vessel arrived safely at 0800 on 26 November.

Foreign paint samples found on Ester J, apparently as a result of the collision, were collected into glass jars and sealed, to assist in identifying the other vessel.

Sources of information

The Inspector acknowledges the assistance given by the following:

The Australian Maritime Safety Authority in making a surveyor available to conduct field investigations.

The owners and crew of Ester J

Hyundai Merchant Marine

Australian Maritime Safety Authority

The United States Coast Guard and particularly the Port Captain, New Orleans.

The staff at Point Lonsdale Signal Station, Port Phillip Heads

The Master and Second Officer of m v Iron Monarch

Telstra

The Inspector acknowledges the assistance given in collecting paint samples by:

The United States Coast Guard and particularly the Port Captain, New Orleans.

The Australian Maritime College

Australian Federal Police, Scientific Unit

Narrative

Ester J

Ester J is a steel hulled fishing boat of 63.11 gross tonnage, built in 1981 in Ningi, Queensland. It is 18.89 m in overall length, has a beam of about 5.4 m, a depth amidships of 2.74 m and is powered by a Gardner eight cylinder geared diesel developing 127 kW, giving a speed of about 10 knots. It is under survey by the Marine Board of Victoria, its last survey being completed on 21 August 1996. The vessel also holds a commercial fishing certificate from the Tasmanian State Authorities.

The hull is painted red in colour with white deckhouse and upper works. Nets are stowed on a reel, forward of the wheelhouse which is effectively the working deck and situated about 10 m from the bow. There is an after deck area of about 2 x 5 m. The deck of the wheelhouse is raised about 1 m from the main deck level, with a galley aft of the wheelhouse at deck level. Sleeping berths are below deck and are reached by a companion way from the galley. On top of the wheelhouse is the radar, navigation aid aerials and a mast, which extends six meters above the deck level.

Ester J is equipped with a range of modern navigation and fishing aids, particularly a Furuno Radar and a Furuno global positioning system receiver and plotter.

The Skipper of Ester J is the joint owner of the vessel. He holds a certificate as a Master Class 5, issued by the Marine Board of Victoria in February 1978.

The incident

Ester J left San Remo at the eastern entrance to Western Port Bay, Victoria, on the evening of 23 November 1996, with the Skipper and two deck hands aboard. They fished by day and into the evening on each day.

On 25 November, they fished through the evening until about 0100 on 26 November. The Skipper then

anchored for the night about 33 miles south of Phillip Island in position 39° 7.88' South 145° 19.25' East, in about 75 m of water. The engine was stopped and the anchor light at the mast head was switched on. Two 150 watt flood lights were also left on, as was the light in the galley area. The wind, as recalled by the Skipper, was south-westerly at 18 knots.

A little after 0200, the deck hand on lookout saw the lights of a ship approaching from the east. The ship seemed to be heading straight for Ester J and the deckhand called the Skipper, who immediately went to the wheelhouse and started the engine. He also made a number of attempts to contact the approaching ship on VHF Channel 16. It very soon became obvious that the approaching ship, which the Skipper assessed as large and probably a tanker, was going to run Ester J down. There was not time to weigh anchor so the Skipper put the fishing vessel's engine full astern. However, the large vessel collided with the port side of Ester J.

The vessel did not stop or try and contact Ester J by VHF radio, but continued on a course, estimated by the Skipper as being west or south-west. As it was dark the Ester J's crew could not read the name, but one of the deck hands gained an impression of a symbol or marking on the ship's bow. The crew immediately checked for damage.

The Skipper called the unidentified vessel on VHF saying:

“You hit me Stand by.”

This was heard by the Second Officer aboard Iron Monarch, which was to the east of Wilsons Promontory on passage for Port Kembla.

At 0234, the Skipper called Melbourne Maritime Communications Centre, initially on 2182 kHz and then on 4125 kHz, and reported the incident. At 0240, Melbourne MCC contacted the Maritime Rescue Coordination Centre in Canberra and passed on the message they had received from the Skipper of Ester J. Melbourne Water Police were also informed.

The collision position was recorded as Ester J's anchor position, 39° 7.88' South 145° 19.25' East, 30 miles from the Victorian coast line in international waters.

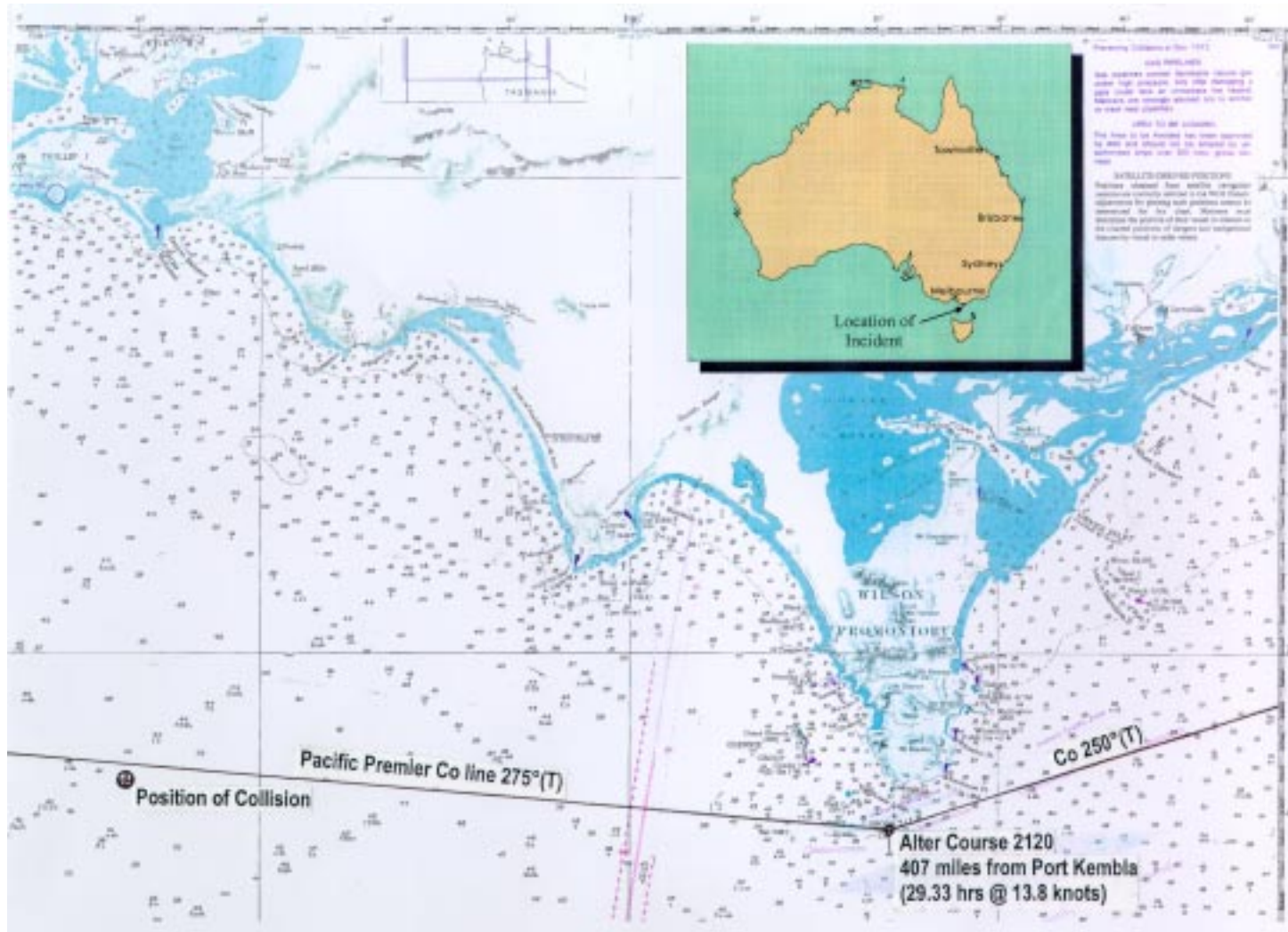
The MRCC immediately analysed their “surface picture” (SURPIC) of ships reporting under the Australian Ship Reporting System. The one ship known to be in the immediate area was the 42,975 tonne deadweight Panama flag bulk carrier Pacific Premier, on passage with coal from Port Kembla to Bin Qasim, Pakistan.

At about 0250, the MRCC attempted to contact Pacific Premier by Inmarsat A, but this was apparently unsuccessful. The MRCC succeeded in transmitting a message by Inmarsat C at 0450, inquiring as to the ship's position at 251515 Universal Coordinated Time (UTC), course, speed and whether any collision occurred. No reply was received and at about 1020 a further message was sent to the ship.

Ester J's Skipper assessed the damage and concluded that there was no immediate danger of sinking. At about 0400, the Skipper confirmed through Melbourne radio that no assistance was required and the fishing vessel was on course for San Remo, where the vessel arrived at about 0800. Victorian Water Police boarded the vessel and took statements. The vessel was also boarded by an AMSA surveyor. Pieces of foreign paint, much of it blue on a grey undercoat, were taken from the deck and hull of Ester J and placed in sealed containers for possible future comparison.

A reply was received from the Master of Pacific Premier at about 1140 on 26 November giving the ships position as 39° 08' South 145° 20' East on a course of 272 and a speed of 11.75 knots and that the officer of the watch reported that no collision or any other problem was experienced during the 0000 to 0400 watch.

On 29 November, the Inspector of Marine Accidents formally initiated an investigation to determine the circumstances and establish the causes of the collision.



Portion of chart Aus 445A&B showing location of incident

Comment and Analysis

Identifying the vessel involved

Eight vessels were identified as being in the general area of Wilsons Promontory and Port Phillip Bay between 0000 and 0800 on 26 November 1976.

Four of these vessels arrived at Port Phillip Heads Pilot Station between 0200 and 0600 and, three were established as being to the east of Wilsons Promontory. The only vessel known to be in the area of the collision at the appropriate time was the bulk carrier Pacific Premier.

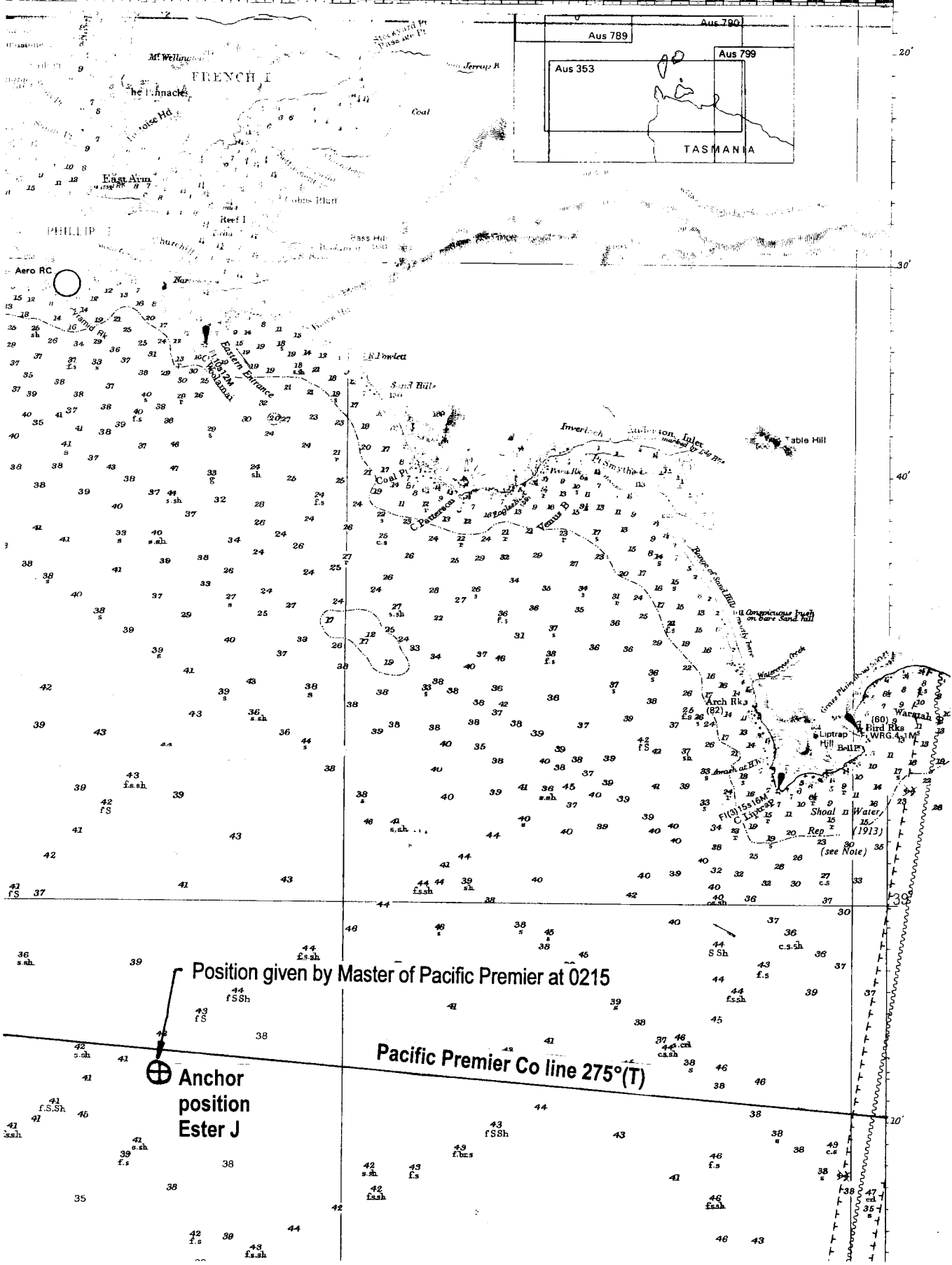
Inquiries of the ship's agent and port authorities in Port Kembla established that the vessel started loading in the evening of 23 November and completed loading in the early afternoon of 24 November. It sailed at 1600 and cleared the pilotage area at 1630. The ship was described as having a distinctive blue hull.

The position of Pacific Premier at 0215 on 26 November, was stated by the Master to be 39° 08' South 145° 20' East. This is consistent with the vessel having sailed 455 miles in the 33.75 hours from dropping the pilot at Port Kembla at a speed of about 13.5 knots. The fishing vessel's position by GPS was 39° 7.88' South 145° 19.25' East. The two positions were less than one mile from each other.

The Pakistan Maritime Authorities and the ship's owners, Hyundai Merchant Marine of Seoul, South Korea, were contacted and paint samples were requested from the ship. However, it was difficult to obtain samples in Pakistan, but the owners sent specifications relating to the ship's hull paint. They also informed the Inspector that the next port of call was New Orleans, towards the end of January 1997.

Paint samples were obtained from two other blue hulled ships, both of which operated from time to time in Bass Strait, these were placed in sealed bags for analysis.

On behalf of the Marine Incident Investigation Unit, the United States Coast Guard obtained samples from Pacific Premier, when it was berthed in New Orleans at the end of January 1997. These samples, together with the foreign samples taken from Ester J and the other samples taken from ships with blue painted hulls were submitted to the Scientific Unit, Forensic Services of the Australian Federal Police for analysis.



Portion of chart AUS 445A showing situation 0215 26 November 1996

The samples taken from Ester J were labelled “D1” and “D2”. The samples taken from the two blue painted Australian ships were labelled “A” and “C” respectively and the Sample from Pacific Premier was labelled “B”.

The paint analysis, see attachment 1, stated that the paint particles in samples “D1” and “D2” could not have come from the same source as either sample “A” or “C”. The Blue paint samples in sample “D1” could not be differentiated by colour, layer structure, surface aspect and chemical composition from the blue paint sample “B” and the samples could have come from the same source. Similarly, the paint sample from “D1” could not be differentiated from sample “B” and the samples could have come from the same source.

The report concluded that the evidence strongly supports the hypothesis that vessel “B” was involved with the fishing vessel from which samples “D1” and “D2” were taken.

Weather and visibility

The Skipper of Ester J reported the wind at 18 knots from the south-west. Pacific Premier’s log book entry for 2400 on 25 November, records the wind as westerly force 7 (28-33) knots with sea and swell state 5 (2 m approx). At 0400 on 26 November, the wind was recorded as force 6 (22-27) and the sea and wave state as 6 (3 m). At both observations the visibility was put at 5. It is not clear what the 5 refers to, whether it is 5 miles or whether it relates to the meteorological “Horizontal Visibility at Surface” table and an observation of 95 and a visibility of 1.1 miles.

Observation for early on 26 November from other ships in the general area indicate at midnight the wind from the west, force 7, (28-33 knots) veering to north-west by 0400 and moderating to force 5 to 6 (21-22 knots), with 11 miles of visibility.

Point Lonsdale, 60 miles to the north-north-west, recorded west-north-westerly winds between 15 and 11 knots at both 0000 and 0300 on 26 November, with 17 miles visibility.

The anchorage

Ester J anchored for the night in the position at which they had completed fishing. Although there is no independent evidence that the vessel was showing anchor lights and floodlights, to show such lights would be typical of fishing vessels, which tend to show their deck lights at all times.

The anchorage position was directly on the track of vessels bound from the eastern seaboard to South Australia, the west coast or for overseas ports in the Indian or Atlantic Oceans. Although not heavily trafficked, the track is in regular use.

Detectability of small vessels at sea

There is some variance in the weather observed. It does seem that the wind speed was 20 knots or more, there was a pronounced swell and the sea was breaking creating white horses. In such conditions, the lights of the fishing vessel, particularly if flood lights were exhibited, should have been readily apparent to any approaching ship with a proper lookout. However, anchor lights alone in breaking seas may not be easily seen until close to.

Also in such sea conditions, a small vessel, even one with a steel hull, would be difficult to detect once inside the range of the sea clutter. In conditions of a fresh to strong breeze the radar return from the waves may extend to five or six miles and, with the swell, the fishing vessel may not return a consistent echo outside six miles. Much would depend on the radar and how well it was set up in terms of tuning and clutter suppression, but radars are not “all seeing eyes” and they may not detect small targets, particularly in sea conditions which create a radar return out to five or more miles.

A visual lookout, as well as a radar watch, is essential aboard any ship, whether underway or at anchor.

Conclusions

These conclusions identify the different factors contributing to the incident and should not be read as apportioning liability or blame to any particular individual or organisation.

The evidence of the paint samples taken from Ester J, together with the circumstantial evidence of the ship's position at 0215 and absence of any evidence indicating any other ship in the area, satisfies the Inspector that the overwhelming probability is that Pacific Premier collided with Ester J.

Prima facie, the lookout maintained by the officer of the watch and any lookout aboard Pacific Premier was not effective in detecting the presence of Ester J by either direct visual means or by radar.

There was nothing to prevent Ester J anchoring in Bass Strait, however, the position of the anchorage was on the direct track from the eastern seaboard to South and Western Australia and hence in a position of greatest hazard.

Submissions

The provisions of sub-regulation 16 (3) of the Navigation (Marine Casualty) Regulations require if a report, or part of a report, relates to a person's affairs to a material extent, the Inspector must, if it is reasonable to do so, give that person a copy of the report or relevant part of the report. Sub-regulation 16(4) provides that such a person may submit written comments or information relating to the report.

The final draft of the report, or parts of thereof, was sent to the Hyundai Merchant Marine.

A submission was received from the Skipper of Ester J in relation to the anchorage position of Ester J:

"This area may well be trafficked by shipping but at the same time is acknowledged as an area commonly used by commercial fishers and therefore, all shipping should be aware of fishing vessels operating there.

There were two other fishing vessels in vicinity (approximately 6-8 miles) at time ("Sheryl Jan" and "Endeavour"). Were they sighted by "Pacific Premier", if not, why not?

No submissions were received from parties connected with Pacific Premier.

Details of Ester J

Name	Ester J
Registered	Australian registered
Official No.	396373
Type	Fishing
Place of build	Ningi, Queensland
Year	1981
Material	Steel
Owner	G M & J F Gair
Gross tonnage	63.11
Net tonnage	41.26
Length overall	18.89 m
Moulded breadth	5.36 m
Moulded depth amidships	2.74 m
Engine	Gardner 8 cylinder
Engine power	127 kW
Crew	3

Details of Pacific Premier

Name	Pacific Premier
IMO Number	9114141
Flag	Panama
Classification Society	KR
Type	Bulk
Builder	Hyundai Heavy Industries, Korea
Year	1995
Owner	Sun Marinos Navigation
Operators	Hyundai Merchant Marine Co.Ltd.
Gross tonnage	25,503
Net tonnage	14,222
Deadweight	43193 tonnes
Summer draught	11.216 m
Length overall	185.06 m
Moulded breadth	30.5 m
Engine	B&W
Engine power	7779 kW
Crew	

**REPORT ON THE EXAMINATION OF PAINT SAMPLES
SUBMITTED IN RELATION TO AN ALLEGED COLLISION INVOLVING AN
AUSTRALIAN FISHING VESSEL IN BASS STRAIT ON 26 NOVEMBER 1996.**

BY

Christopher James LENNARD, BSc PhD

FORENSIC SCIENTIST

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SCIENTIFIC BRANCH REFERENCE: SB 97/52

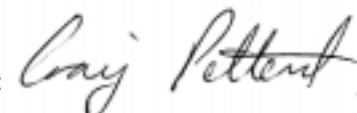
27 February 1997

This report consists of four (4) pages, each signed by me.

Signed:



Signature witnessed by:



1. CUSTODY OF ITEMS

1.1. Receipt

On 20 February 1997, Forensic Services, Australian Federal Police, received the following samples from Captain C W Filor, Inspector of Marine Accidents, Transport and Regional Development:

- A. A snap-seal plastic bag containing a sample of blue paint from vessel "A".**
- B. A snap-seal plastic bag containing a sample of blue paint from vessel "B"**
- C. A snap-seal plastic bag containing a sample of blue paint from vessel "C"**
- D. A blue zippered PVC box containing:**

D 1. A glass jar labelled "Sample No.1. Port corner of aft deck house..." containing a paint sample from the damaged fishing vessel.

D2. A glass jar labelled "Sample No. 2. Port corner of aft deck house..." containing a paint sample from the damaged fishing vessel.

1.2. Custody

**Prior to and following examination, the exhibits were stored in a secure exhibit storage area located in the Forensic Services' laboratory at the AFP's Weston Police Complex, ACT.
The exhibits are returned with this report.**

Signed:



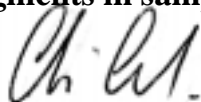
Signature witnessed by:



2. EXAMINATION & INTERPRETATION

- 2.1. **I examined the items listed in Section 1.1 of this report.**
- 2.2. **Each paint sample was examined by stereo microscopy, visible microspectrophotometry (MSP; colour analysis), and Fourier transform infrared microspectrometry (micro-FTIR; organic analysis). X-ray microfluorescence spectroscopy micro-XRF; inorganic analysis) was applied to samples “B”, “D1” and “D2”.**
- 2.3. **Sample “A” consisted of numerous blue paint fragments. Some fragments contained three distinct layers (blue topcoat, light grey intermediate layer, dark grey undercoat), while others contained up to six distinct layers (blue topcoat/light grey layer/dark grey layer/redorange layer/blue layer/grey undercoat).**
- 2.4. **Sample “B” consisted of numerous blue paint fragments. Each fragment consisted of two distinct layers: blue topcoat, grey undercoat.**
- 2.5. **Sample “C” consisted of numerous blue paint fragments. Each fragment consisted of up to seven distinct layers: blue topcoat/brown layer/blue layer/brown layer/blue layer/brown layer/blue undercoat.**
- 2.6. **Sample “D 1” consisted of a large (approx. 3 x 4 cm) multilayered red paint chip and numerous small red and blue paint fragments. The large red paint chip had numerous blue particles smeared across the top surface. The blue particles present in this sample appear to be single-layer blue paint.**
- 2.7. **Sample “D2” consisted of numerous blue paint fragments. Each fragment consisted of two distinct layers: blue topcoat, grey undercoat.**
- 2.8. **Stereo microscopy failed to differentiate paint fragments in sample “B” from paint fragments in sample “D2” (surface aspect, colour, paint layer structure). Samples “A” and “C” were clearly different in surface aspect, colour, and paint layer structure from sample “D2”. As a result, samples “A” and “C” could not have come from the same source as sample “D2”.**
- 2.9. **Micro-FTIR analyses confirmed that the blue paint particles in sample “D1” could not have come from the same source as either sample “A” or sample “C”.**
- 2.10 **MSP, micro-FTIR and micro-XRF analyses failed to differentiate paint fragments in sample “B” from paint fragments in sample “D2” (colour, organic).**

Signed:



Signature witnessed by:



3. SUMMARY

- 3.1. **Blue paint particles in item “D 1” (from fishing vessel) and blue paint fragments in item “D2” (from fishing vessel) could not have come from the same source as either sample “A” or sample “C”.**
- 3.2. **Blue paint fragments in item “D2” could not be differentiated (by colour, layer structure, surface aspect, and chemical composition) from blue paint fragments in sample “B”. These samples could have come from the same source.**
- 3.3. **Blue paint particles in item “D1” could not be conclusively differentiated (by colour, aspect and chemical composition) from the blue paint layer in sample “B”. These samples could have come from the same source.**
- 3.4. **The evidence strongly supports the hypothesis that vessel “B” was involved in the collision with the fishing vessel from which samples “D1” and “D2” were taken.**

Signed:



Signature witnessed by:

