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INTRODUCTION

About 0134 on 20 June 1985 the Australian registered bulk carrier River Boyne of 51994 gross tons, on passage from Weipa to Gladstone with a cargo of bauxite, collided with the Australian registered fishing vessel Babirusa, on passage from Cairns to the Gulf of Carpentaria, in approximate position 14' 18'S, 114° 39'E. There was no injury to any person and the only damage sustained was to the starboard outrigger boom and the sternlight on the Babirusa.

Having established that the Babirusa required no assistance, the River Boyne continued its voyage to Gladstone. The Babirusa returned to Cairns for repairs.

AUTHORITY TO CONDUCT INVESTIGATION

On 24 July 1985 Captain Jeremy Stephen Price, an officer of the Federal Department of Transport, was appointed under sub-section 377A(1) of the Navigation Act 1912 to make a preliminary investigation into the circumstances of the collision between the s.s. River Boyne and the f.v. Babirusa and in particular:

the factors which caused or contributed to the collision

whether there were any contraventions of the International Regulations for Preventing Collisions at Sea 1972 by either or both vessels, and whether this was a contributory factor to the collision.

PERSONS INTERVIEWED

In the course of the investigation the following persons were interviewed:

Captain K.C. Casey	Master, <u>River Boyne</u>
Mr R.S. Woodfield	Second Officer, <u>River Boyne</u>
Mr R. Johnston	Queensland Coast and Torres Strait Pilot
Mr H.J. Mallie	Lookout, <u>River Boyne</u>
Mr R. Lawson	Helmsman, <u>Babirusa</u>
Mr W.J. McKay	Skipper, <u>Babirusa</u>
Mr G.J.A. Houlaha	Deckhand, <u>Babirusa</u>

Note: The interviews with Mr Mallie, Mr McKay and Mr Houlahan were conducted by telephone.

DETAILS OF VESSELS

RIVER BOYNE

OFFICIAL NO : 850245
PORT OF REGISTRY : Sydney
OWNERS : Australian National Line
BUILDER : Mitsubishi Heavy Industries, Nagasaki, Japan
SHIP TYPE : Bulk carrier
CLASS : + 100A Ore Carrier, + LMC, UMS
MAIN ENGINE : Steam turbine 13976 kW
PROPULSION** : Single screw
GROSS TONNAGE : 51935
NETT TONNAGE : 27013
LENGTH : 255.20 m
BREADTH : 35.39 m
DEPTH : 18.30 m

CERTIFICATES:

CARGO SHIP SAFETY EQUIPMENT : Issued by Department of Transport
9.10.84. vALID UNTIL 19.9.85.
CARGO SHIP SAFETY RADIOTELEGRAPHY : Issued by Department of Transport
9.10.84. Valid until 19.9.85.
LOAD LINE : Issued by Lloyds Register 10.7.84. Valid
until 16.9.86. Last annual inspection
14.10.84
CARGO SHIP SAFETY CONSTRUCTION : Issued by Lloyds Register 20.1.83. Valid
until 16.9.87.

BABIRUSA

IDENTIFICATION LETTERS :	FRUV
PORT OF REGISTRY :	Townsville
OWNER :	W.J. & J. Mckay
SHIP TYPE :	Prawn trawler
MAIN ENGINE :	Diesel
PROPULSION:	Single Screw
SPEED :	10 knots
LENGTH :	17 m
BREADTH :	5.2 m
DEPTH :	2.4 m
PERMIT TO OPERATE:	Queensland Department of Harbours and Marine

Note: This vessel is under survey of the Queensland Department of Harbours and Marine. Although not holding a valid survey certificate at the time of the collision, it had been inspected by a surveyor of the Department and had been issued with a Permit to Operate.

SEQUENCE OF EVENTS

On the evening of 19 June 1985 the River Boyne was in the vicinity of Cape Melville in northern Queensland (see Attachment 1). The weather was fine with good visibility and a light south-easterly breeze. The Master, Captain Casey, having written up his night orders on the bridge, went below about 2230 and retired to bed. This left the Third Officer, in charge, with the pilot on the bridge, and a seaman lookout on the wheelhouse top. The Master's night orders stated that courses throughout the night were to be to pilot's advice, that the Master was to be called immediately if the officer of the watch was in any doubt and that Company Standing Orders were to be observed.

The remainder of the Third Officer's watch passed without incident and he was relieved by the Second Officer, Mr Woodfield, at midnight. The seaman lookout also changed at this time. The pilot remained on the bridge.

At 0045 with Pipon Island bearing $304^{\circ}(T)$ distant 6.4 miles the course was altered to $157^{\circ}(T)$. This alteration brought five fishing boats up ahead, four fine on the starboard bow and one fine on the port bow. In regard to the vessels on the starboard bow the pilot observed these to be off Barrow Island, that is about 10 miles away, and heading in a southerly direction. The pilot also noted these vessels were exhibiting the prescribed mast lights for vessels engaged in trawling and concluded they were actually doing so. However, the Second Officer's recollection of their position puts them at between 3.5 and 4 miles away. The vessel on the port bow was observed by the pilot to be about 4 miles away and appeared to be roughly on the same course as the River Boyne. The pilot could not see the prescribed lights for a fishing vessel engaged in trawling and he concluded it was under way but not fishing. The Second Officer's recollection of this vessel's position puts it about 5 to 6 miles away. He, like the pilot, believed the trawler to be proceeding in the same direction as the River Boyne. All five vessels were exhibiting bright working lights, which are generally located aft on such vessels. In his statement the pilot pointed out that, when viewed from aft, as appeared to be the case in this instance, the working lights are clearly distinguishable whereas from ahead there is normally just a bright glow.

At 0047 the pilot left the wheelhouse and lay down on the chartroom settee, leaving instructions with the Second Officer to keep the ship to the course laid down on the chart, $157^{\circ}(T)$ and to call him at a point he marked PCP on the chart (see Attachment 2) or at any time if required.

Meanwhile on the Babirusa, Mr Lawson took over the watch from Mr Houlahan at 0033 on 20 June. Neither Mr Lawson nor Mr Houlahan appeared able to recall with certainty the position of the Babirusa at 0033. Mr Lawson, having stated the Babirusa was just south of Newton Island at 0033, subsequently amended this position to a point midway between Bewick Island and Barrow Point. Mr Houlahan originally stated the Babirusa was two miles off Barrow point but, when told of Mr Lawson's first statement, agreed that a position off Newton Island was feasible (see Attachment 2).

Mr Lawson stated that prior to coming on watch he was well rested, having slept for some hours during the day and then from 2030 in the evening. During his watch Mr Lawson fixed the Babirusa's position every 10 or 15 minutes, using radar ranges of shore features and plotted these on the chart "with compasses". No visual or radar bearings were taken and no times were recorded against the plotting positions. Although the aim was to keep to the

recommended track, Mr Lawson stated that compass courses as such were not steered. Instead, the vessel's head would be lined up on a landmark or by radar and the auto-helm engaged on that heading.

Coming up to Barrow Point Mr Lawson made an alteration of course to starboard, so as to follow the line of the recommended track. Shortly afterwards, at 0045, he observed a ship on radar fine on the starboard bow 13 miles away. The ship was the River Boyne. Mr Lawson estimated the Babirusa was just to the south of Barrow Point at this time (see Attachment 2). A little while later Mr Lawson observed the River Boyne visually. It was showing three red lights (exhibited in a vertical line to indicate a deep draught vessel), a mast light and a red light (port side light). At no stage did Mr Lawson see the green starboard side light of the River Boyne.

As the River Boyne approached, Mr Lawson altered course to port and headed between north and west towards Ninian Bay. He estimated the River Boyne would then have been between 5 and 8 miles away. It should be noted however, that Mr Lawson appears to have been somewhat uncertain as to the Babirusa's position at this time. Mr McKay (Skipper) reported Mr Lawson as telling him, afterwards, that the Babirusa was to the east and parallel to the recommended track; whereas in his statement to the investigating officer Mr Lawson claimed to be half a mile to the west of the recommended track.

Despite Mr Lawson's alteration to port the River Boyne still appeared to be heading towards him. Mr Lawson then altered further to port, heading somewhere between Beaby Hill and North Bay Point (see Attachment 2). However, the River Boyne continued to bear down on the Babirusa and Mr Lawson therefore assumed the River Boyne was altering its course to starboard. Mr Lawson then twice tried calling the ship up on the V.H.F. radiotelephone, with an interval of about one minute between calls. Getting no response, he slowed the engine to about quarter throttle and went forward to call the Skipper. Returning immediately to the wheelhouse, Mr Lawson realised that a collision was imminent so he put the helm hard to port. However, the starboard fishing boom was clipped by the River Boyne and then its bow wave pushed the Babirusa clear. It was at this moment that the Skipper reached the wheelhouse. Mr Lawson estimated the collision point to be just inside Ninian Bay; this position is indicated on Attachment 2. An examination of the damage revealed that the starboard fishing boom had bent back and smashed the sternlight.

On the River Boyne, following the departure of the pilot from the wheelhouse, the Second Officer had been checking the approach of the fishing vessels ahead. He soon established by visual bearings that the four on the starboard bow should pass well clear so he concentrated his attention on the vessel on the port bow which, as noted above, he believed he was overtaking. This vessel was the Babirusa. The Second Officer states he took frequent visual bearings of the Babirusa on the central gyro repeater situated in the wheelhouse and observed its bearing to be opening slowly but steadily to port. He also observed the Babirusa on radar from time to time but did not ascertain its course and speed by plotting. However, based on his visual and radar observations, he estimated the Babirusa would pass 4 cables distant down the River Boyne's port side.

About 0130, as the River Boyne approached the position where the pilot was to be called, the Second Officer again checked the Babirusa's bearing and, having scanned the horizon for more lights, went to the radar to fix the River Boyne's position. He obtained a radar bearing and range of Barrow Island and

was on his way to the chart table when, glancing at the Babirusa, he realised that it was not where he thought it ought to be. Going immediately to the gyro repeater he observed the bearing had closed slightly. It was about this time that the Second Officer heard a garbled transmission over the VHF but was too busy watching the fishing vessel to try to answer it. A further check a few seconds later confirmed that the Babirusa was closing rapidly and, still believing the Babirusa to be heading in the same direction as the River Boyne, he assumed it had altered course to starboard. The Second Officer immediately put the auto helm hard to starboard, at the same time calling for the pilot to come to the wheelhouse. As the pilot appeared, only moments later, the Second Officer sounded one short blast on the whistle. By this time the Babirusa appeared to be heading at right angles to the River Boyne and was very fine on the port bow. It then disappeared under the bow, reappearing on the starboard side. The time was 0134. As the Babirusa appeared to starboard the Second Officer put the River Boyne's helm hard to port to prevent the bow swinging to starboard. The estimated collision point, as observed from the River Boyne, is shown on Attachment 2. At 0138, approximately, the Master was called but, by the time he arrived on the bridge, the fishing vessel was well astern.

No navigation lights were observed on the Babirusa by either the Second Mate or the Pilot. The Seaman lookout, however, stated he saw a green light just before the collision.

OBSERVATIONS

1. There is a slight discrepancy in the times reported by the River Boyne and the evidence of its course recorder trace. The Second Officer and pilot state the alteration to 157° occurred at 0045 and the collision at 0134, an interval of 49 minutes. The course recorder trace indicates there was only a 43 minute interval between the alteration to 157° and the helm movement hard to starboard followed immediately by a helm movement to port (this is commensurate with the Second Officer's actions in checking the vessel's starboard swing after it struck the Babirusa). This discrepancy is not considered to be of significance to the circumstances of the collision.

In regard to Mr Lawson's belief that the River Boyne altered course to starboard after he altered course to port and before he went below to call the Skipper, the River Boyne's course recorder chart shows no alterations until the hard-to-starboard just before the collision.

2. The pilot and Second Officer assumed that the vessel observed on the port bow at 0045 was going in the same direction as the River Boyne. However, it is clear that the Babirusa was on a voyage northwards. There appears to be only two plausible explanations:
 - (a) the pilot and Second Officer were mistaken as to the Babirusa's aspect
 - (b) the vessel observed at 0045 was not the Babirusa. However, the Second Officer was quite certain that the vessel on the port bow at this time was the one subsequently involved in the collision.
3. The collision point as estimated by Mr Lawson is about one mile to the west of that estimated by those on the River Boyne. Mr Lawson's estimate is clearly in error for at such a point the River Boyne would have been aground. The River Boyne's estimate is consistent with the course steered and the ship's speed from the last plotted position at 0111.

CONCLUSIONS

(The Rules referred to in this section of the report are those contained in the International Regulations for Preventing Collisions at Sea, 1972 as amended)

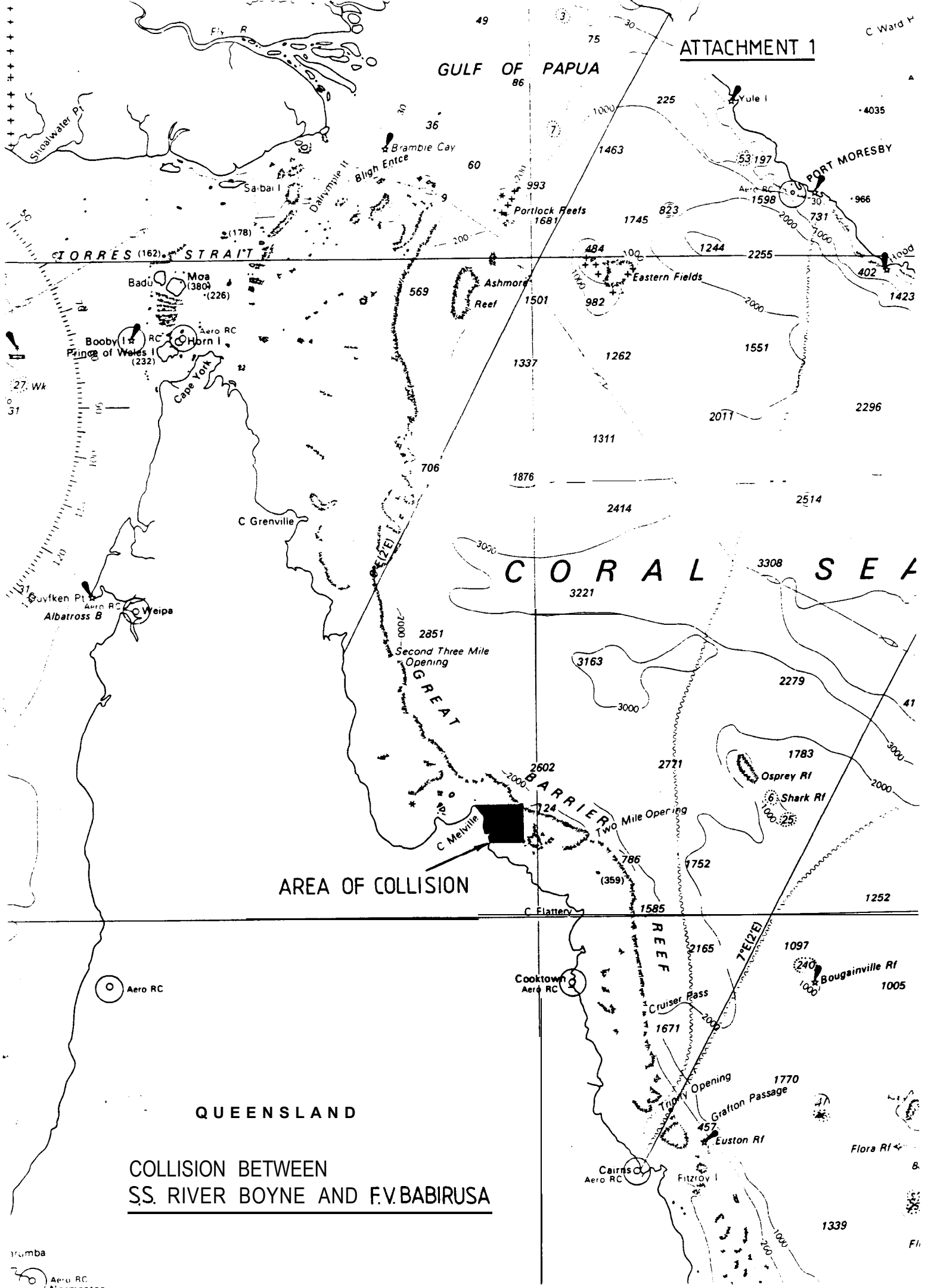
As noted above there are some differences in the versions of the event as recalled by the principal witnesses. In the absence of independent evidence, these differences have not been resolved, therefore the full facts of the events leading up to the incident cannot be determined. Nevertheless it may be concluded that:

1. the collision would appear to have been immediately caused by the action of Mr Lawson on the Babirusa in altering course into the path of the River Boyne and that Mr Lawson:
 - (a) failed to keep a proper lookout as required by Rule 5, in that he did not make a full appraisal of the situation and of the risk of collision; and in particular
 - (b) failed to determine if risk of collision existed as required by Rule 7. In the prevailing conditions the simplest and probably most effective means of determining risk of collision would have been for Mr Lawson to watch the compass bearing of the River Boyne;
2. even if risk of collision had existed prior to the Babirusa's first alteration to port, which almost certainly was not the case, an alteration to port was entirely inappropriate ~~a~~voiding action;
3. Mr Lawson's failure to properly determine risk of collision and take appropriate action can be attributed to his lack of knowledge and experience. However, Mr Lawson should have been aware of his own limitations and called the Skipper earlier.
4. the Babirusa was improperly exhibiting lights which impaired the visibility and distinctive character of its navigation lights;
5. Mr Woodfield, Second Officer of the River Boyne failed to keep a proper lookout as required by Rule 5 in that he failed to ascertain by radar the course and speed of the approaching vessel and thus neglected "by all available means in the prevailing circumstances and conditions . . . to make a full appraisal of the situation and of the risk of collision". Although Mr Woodfield, by watching the compass bearing of the Babirusa, properly determined that risk of collision did not exist up to the time he went to fix the River Boyne's position by radar observation, I consider that, had he determined that the Babirusa was heading towards him rather than in the same direction, he probably would have continued to observe the Babirusa carefully and would thus have detected its alteration of course earlier;
6. that the positions plotted on the River Boyne's chart at 0100 and 0111 were substantially correct and that the collision occurred in the vicinity of, latitude 14° 18'.4S, longitude 144° 39'.2E;
- 7, the Second Officer of the River Boyne was properly qualified and competent to be left in sole charge of the watch. No blame for the

collision rests with the Master or the pilot for leaving him in sole charge of the watch;

8. that both vessels were seaworthy at the time of collision
9. following the collision the Master of the River Boyne took appropriate measures to ascertain the Babirusa was not in need of assistance.

GULF OF PAPUA

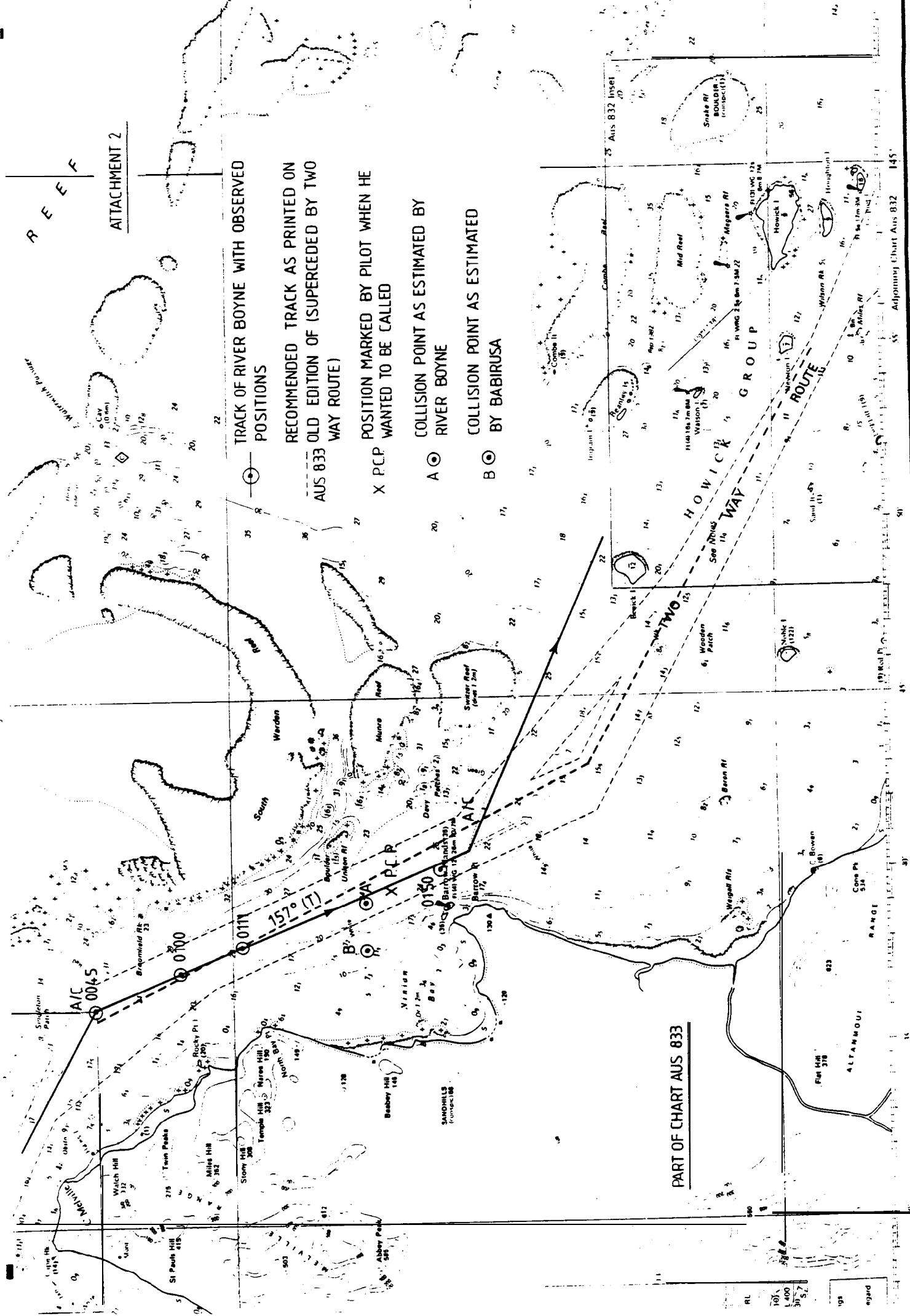


AREA OF COLLISION

COLLISION BETWEEN SS. RIVER BOYNE AND F.V. BABIRUSA

QUEENSLAND

Aero RC



REEF
ATTACHMENT 2

TRACK OF RIVER BOYNE WITH OBSERVED POSITIONS

RECOMMENDED TRACK AS PRINTED ON OLD EDITION OF (SUPERCEDED BY TWO AUS 833 WAY ROUTE)

POSITION MARKED BY PILOT WHEN HE WANTED TO BE CALLED

COLLISION POINT AS ESTIMATED BY RIVER BOYNE

COLLISION POINT AS ESTIMATED BY BABIRUSA

PART OF CHART AUS 833

25 Aus 832 Inset

145°

Admiralty Chart Aus 832

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DEPTHS IN METRES

our Ver. R.A.N