

Final Draft Accident Report

Poseidon

Grounding

North of the Manukau Bar on 15 April
2004

KEEPING YOUR SEA SAFE FOR LIFE



Maritime Safety

MARITIME SAFETY AUTHORITY OF NEW ZEALAND
Kia Maanu Kia Ora



SUMMARY

On 15 April 2004 the surface long-line vessel *Poseidon* departed the fishing grounds and started to steam for the port of Onehunga. At 0030 hours, the Skipper and one crew went to bed leaving a second deckhand on watch. After 1¼ hours on watch this deckhand attempted to wake the other deckhand but he never came to the wheelhouse. While waiting, the deckhand on watch fell asleep and the vessel grounded north of the Manukau Bar.

Report No: 04 3449

Vessel Name: Poseidon

1. KEY EVENTS

- 1.1** During the morning on Thursday 8 April 2004, the Skipper and two crew departed the berth at Onehunga onboard the surface long-line fishing vessel *Poseidon*.
- 1.2** The vessel was bound for fishing grounds approximately 40 nautical miles (nm) west of Kawhia Harbour, (*See Appendix I - Position A, Fishing Area*).
- 1.3** Upon arrival at the Manukau Bar, the Skipper decided that conditions were too rough to cross the bar at that time and instead anchored the vessel in the deepwater area adjacent to Cornwallis Point.
- 1.4** During the following days of 9 and 10 April, the Skipper assessed the bar conditions, but again decided he was unable to cross the bar safely.
- 1.5** On the morning of Sunday 11 April conditions on the bar had improved enough to allow the vessel to cross safely. Once completed, the Skipper made passage to his intended fishing grounds.
- 1.6** At 2200 hours New Zealand Standard Time (NZST), after arriving at the fishing grounds and having the crew prepare the deck, the Skipper started shooting the long line.
- 1.7** At approximately 0200 hours, on Monday 12 April, the Skipper and crew had completed shooting the long-line. The Skipper hove the vessel to and shut down the main engine. He and the crew then had a meal and, about an hour after shooting, they all went their bunks to sleep. Crewman 'A' states that he got between 6 and 7 hours sleep during the day.
- 1.8** At 1500 hours, they started hauling the long line.
- 1.9** Shortly before midnight, they finished hauling and were preparing to shoot the line again in the same general area. Shooting was completed just before dawn on the morning of Tuesday 13 April.
- 1.10** After a meal the Skipper and crew all retired to their bunks to rest. Crewman 'A' states that again he got about 6 to 7 hours sleep during the day.
- 1.11** At 1500 hours, the Skipper steamed back to the long line and hauling started again. This was completed at 0230 hours on Wednesday 14 April. Again the line was re-shot in the same area immediately. This was completed at 0530 hours.

- 1.12** After a meal the Skipper and crew retired to their bunks to sleep for approximately 6 to 7 hours.
- 1.13** At 1600 hours, the long line was hauled in again for the last time; this was finished at about midnight. The fish was put away and the deck made ready for the steam back to Onehunga.
- 1.14** Shortly after midnight, the Skipper plotted a course on the GPS plotter and started the passage. The two crew were having a coffee in the wheelhouse with the Skipper.
- 1.15** At about 0030 hours on Thursday 15 April the Skipper and crewman 'B' went to bed leaving crewman 'A' on watch, as arranged, for 1¼ hours. After this he was to wake crewman 'B' for a watch of 1¼ hours.
- 1.16** At 0145 hours he went below into the focsle and gave crewman 'B' a shake who responded saying "I'm awake, I'm awake". He returned to the wheelhouse to await his relief.
- 1.17** Crewman 'A' states he remembers waiting for about ½ an hour but was not relieved during this time and assumed crewman 'B' had gone back to sleep.
- 1.18** Crewman 'A' fell asleep while still on watch, at or about 0215 hours.
- 1.19** At approximately 0340 hours, the vessel grounded in position 37° 01.831' S 174° 28.448' E. This was approximately 1.7 nm north of the Manukau Bar. (*See Appendix II - Position A*)
- 1.20** The Skipper and crew immediately woke with the change of motion, as the vessel had crossed through the large breakers on the exposed beach. The Skipper attempted to get off the beach by firstly going full astern and then ahead and hard to port to try and turn the vessel. These attempts were unsuccessful due to the vessel being hard aground. During these attempts, waves were breaking over the stern of the vessel. At one point a large tangle of long-line backbone, that was stored on the bow, was washed over and fouled the propeller, which effectively put it out of commission.
- 1.21** During this time the two crew retrieved the life raft from its cradle on the monkey island and had it lashed, floating in the water, to the starboard side of the vessel. Shortly after this it was washed up onto the beach.
- 1.22** At 0346 hours, the Skipper put out a Mayday call on VHF channel 16. This was acknowledged by Auckland/Plenty Maritime Radio who then broadcast a distress relay on channel 16.

- 1.23** At 0351 hours, Coastguard Northern region acknowledged the relay. At this time they paged the Manukau Coastguard controller.
- 1.24** At 0405 hours, the Skipper of *Poseidon* advised Maritime Radio that they were in no immediate danger but would have to abandon in the future, as the vessel was hard aground.
- 1.25** At 0411 hours, Auckland/Plenty Maritime Radio cancelled the distress and broadcast a Pan relay on VHF channel 16.
- 1.26** At 0549 hours, Manukau Coastguard vessel advised that they were standing off *Poseidon* and could not get within 100 metres due to the breaking waves.
- 1.27** After discussing the situation with Manukau Coastguard and Police it was decided to lift the Skipper and crew off the vessel using the Westpac rescue helicopter. This task was completed at about 0730 hours.
- 1.28** On Friday 16 April arrangements were made for the salvage of the vessel. This was completed at high water later that evening. (*See Appendix III - Photograph of vessel aground*). The vessel was towed into Onehunga for initial repairs then on to Nelson for permanent repair to be completed.

2. KEY CONDITIONS

2.1 Vessel Details

- 2.1.1** *Poseidon* is an offshore fishing vessel of wooden construction built in Timaru in 1966. She has an overall length of 14.63 metres, a breadth of 4.26 metres and gross tonnage of 26. A single 6L3B Gardner main engine powers the vessel through a standard 43-inch fixed pitch propeller.
- 2.1.2** Poseidon Fishing Company Limited owns *Poseidon*. The directors of the company are made up of the Skipper and a partner, who does not work on the vessel. The company is based in Christchurch.
- 2.1.3** The vessel had a valid Safe Ship Management (SSM) Certificate with SGS-M&I. The vessel was fit to ply offshore limits within 100 nm of the New Zealand coast, including Chatham and Stewart Islands. The vessel has conditions listed in the SSM Manual that limit it to ply as a Restricted Coastal fishing vessel when skippered by the holder of a Commercial Launch Master (CLM) qualification. A 4 yearly survey had been carried out in Opuia, in July 2003. The last in-water systems audit was carried out on 13 March 2001.

2.2 Skipper Details

- 2.2.1** The Skipper holds a CLM Certificate obtained in 1995. He also holds a 2nd Class Diesel Trawler Engineer (2DTE) Certificate obtained in 1995.
- 2.2.2** He has over 15 years experience as a commercial fisherman. He has been Skipper of many vessels around New Zealand, and has also sailed as an engineer on board a 30 metre long-liner around the Pacific Islands. He had only recently returned from the Islands and this was his second trip back.
- 2.2.3** He alone was responsible for the employment and training of any crew required for the vessel.

2.3 Crew Details

- 2.3.1** Crewman 'A' was 18 years old and held no maritime qualifications at the time of the accident.

2.3.2 In 2002, he completed a 32-week pre-sea training course, held at the Bay of Plenty Polytechnic, using the unit standard format. He attained the National Certificate in Seafood Vessel Operations (Deckhand) level 3. This course included a number of sea-time modules which were completed by Crewman A. The course included subjects ranging from fish spoilage to safe deck work practises through to navigation and seamanship, fatigue and watch keeping.

2.3.3 He had worked on a number of offshore and coastal vessels similar to *Poseidon*.

2.3.4 Crewman 'B' held no maritime qualifications. He had not been interviewed since the grounding due to the fact that he has not made contact with any Authorities and has simply disappeared. It is understood that he has some experience in the fishing industry and that this trip was his first on this vessel.

2.4 Manning details

2.4.1 In 2.1.3 above, the vessel is fit to ply as a fishing vessel in the Offshore limits. The manning for this vessel is listed in **Maritime Rule Part 31C.10 Offshore Area: -**

Vessel Length	Minimum Required Qualifications	Minimum crew
Less than 20m and within 100nm of coast	Master-NZOM MEC 6 may be Master	2

- **NZOM** New Zealand Offshore Master
- **MEC 6** Marine Engineer Class 6, or 2DTE as an equivalent

2.4.2 The Skipper held a CLM certificate which allows the holder to be the Master of a fishing vessel up to 15.24 metres operating out to 12 nm only. He admitted when interviewed that he was fishing approximately 39 nm off the coast and that this was outside the prescribed limits of his CLM.

2.5 Navigation Equipment

2.5.1 The vessel was equipped with the following navigation equipment: -

- Furuno F.R 711 72 nm radar
- 125mm Sestrel Liquid Magnetic compass
- Icom IC M 710-NZ single side band radio
- GME GX558 VHF radio
- JMC V/1002 echo sounder
- TMQ AP4 autopilot
- Furuno GP-31 GPS receiver
- Computer based plotting software

2.5.2 All of the above electronic equipment was switched on at the time of the grounding. All navigation lights were operational.

2.5.3 The Skipper had entered a waypoint and associated course line on the chart plotter. The waypoint was about 5 nm west of the Manukau Bar. This position was where he wanted to be woken up by crewman 'B'. There were no course alterations required on either watch, as it was a straight line course from start to finish. The Skipper had activated a Cross Track Error (XTE) alarm on the GPS plotter, but this was a visual alarm only and was not audible. No waypoint arrival alarm had been activated.

2.5.4 No other alarms had been activated on any of the other electronic aids to navigation.

2.6 Weather

2.6.1 The weather on the return voyage to Onehunga was described as being calm with 10 to 15 knots of northwest wind and 1½ to 2 metres of southwest roll. Visibility was good.

2.7 Fishing Method

2.7.1 *Poseidon* was a surface long-line vessel. In this case, this method involves setting 27 nm of monofilament backbone that is suspended between 2 and 20 metres below the surface. Attached to this backbone is between 1200 and 1400 baited hooks. These are left to 'fish' for about 12 hours in this case, and then retrieved. Depending on the catch, this can take between 8 and 14 hours.

2.7.2 The Skipper of *Poseidon* was setting generally between about 0200 hours and first light, letting the line fish up to about 1500 hours, then hauling until 0200 hours. Larger amounts of fish caught would slow the hauling time considerably.

2.7.3 After the line was set and fishing commenced, the main engine would be shut down and the generator left running to provide ship's power. The Skipper and the two crew would all retire to their bunks for some of the rest period. The Skipper stated that he slept on a day bunk in the wheelhouse when hove to. This is in contradiction to **Maritime Rule Part 22.5 Look-Out:** -

- *Every vessel must at all times (our emphasis) maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions, so as to make a full appraisal of the situation and the risk of collision.*

2.8 Human Factors

2.8.1 The Skipper and crewmen were able to rest for significant periods during the day. There were three consecutive days where approximately 10 hours was available to them for rest.

2.8.2 The work/rest patterns for the trip were as follows: -

DAY	WORK	REST TIME AVAILABLE	SLEEP (APPROX)
Thursday 8	Depart wharf 1000 hours to anchor		
Friday 9	At anchor	24 hours	
Saturday 10	At anchor	24 hours	
Sunday 11	2 hours	22 hours	
Monday 12	10 hours	14 hours	6-7 hours
Tuesday 13	14 hours	10 hours	6-7 hours
Wednesday 14	13½ hours	10½ hours	6-7 hours
Thursday 15	1 hour	3 hours up until grounding	

2.8.3 The Skipper stated that he tried to keep the trips down to about 6 to 7 days at sea. This trip consisted of 7 nights away, but due to being unable to cross the Manukau Bar only 4 nights were spent fishing at sea.

2.8.4 During the periods of ‘fish’ time when the vessel was hove to, the main engine was shut down with the generator running. All deck lights were left on as well as the vessel’s fishing lights and anchor light. When a vessel is fishing, its lights are prescribed in **Maritime Rule Part 22.26 - Fishing Vessels (3) (a) (i)**:*- two all-round lights in vertical line, the upper being red and the lower white.*

(c):- in addition, when making way through the water, sidelights and a stern light.

The Skipper was showing an anchor light when hove to. This light is an anchor light only and should not have been exhibited in this case; the vessel was not made fast to fishing gear and was not engaged in fishing. With the main engine shut down and the vessel not making way through the water, she should have been exhibiting two all-round red lights in a vertical line where they can best be seen: **Maritime Rule Part 22.27 (1) (a) – Vessels not under command.**

2.8.5 Crewman ‘A’ attempted to wake his watch relief but was unable to do so. He waited an extra ½ hour but fell asleep during this period.

2.8.6 The Skipper and crewman ‘A’ had not consumed any alcohol during the trip. A bag of marijuana was found amongst other items washed up on the beach at the high water mark at the grounding site. Both the Skipper and crewman ‘A’ denied ownership or use of this. Both offered to undertake a blood test when interviewed. No such test was conducted.

2.8.7 The Skipper failed to fulfil his responsibilities under **Maritime Rule Part 31C.15 Fatigue**:

(1) When the owners and the Master of a fishing vessel establish and implement procedures for ensuring a seafarer’s fitness for duty, they must take into account that:-

- (a) the level of alertness of a person keeping a navigational watch or engine room watch may be affected by fatigue.*
- (b) whenever alertness is affected by fatigue performance can be impaired.*

(2) A seafarer on a fishing vessel, when considering his or her fitness for duty, must take into account:-

- (a) the signs, symptoms, and affects of fatigue*
- (b) that fatigue will affect his or her level of alertness*
- (c) that the performance of any person whose alertness is affect by fatigue can be impaired.*

- 2.8.8** The Skipper had set short 1 ¼ hour watches so he could get some rest before crossing the Manukau Bar and steaming up to Onehunga.
- 2.8.9** Even though the people on board had ample opportunity for sleep during the day, the time of day available for sleep was in contrast to when the human bodies natural circadian rhythm requires sleep to be taken. Our circadian clock makes us sleepy or alert on a regular basis whether we are working or not.
- 2.8.10** In a study compiled by the Canadian Transport Safety Board they state that although individual rhythms may vary, everybody's cycle has two distinct peaks and dips. The big dip is at night, with the time of our lowest alertness in the hours just before dawn between 0300 and 0500 hours. The *Poseidon* grounding occurred at 0340 hours. During the dips it can be particularly difficult to maintain alertness. Whenever alertness is affected by fatigue, human performance can be significantly impaired. Alertness cycles closely follow the body temperature cycle, with peak alertness occurring when the body temperature is highest, near midday and low alertness occurring when the body temperature is lowest, between 0300 and 0500 hours.
- 2.8.11** A person deprived of sleep for an extended period, such as by working all night and then not being able to obtain significant sleep the next day, will usually take 2 normal nights sleep to fully recover. Workers who are required to sleep during the day are more likely to experience shortened sleep and frequent awakenings. Fatigue can lead to forgetting or ignoring normal checks or procedures, reversion to old habits, and inaccurate recall of operational events. The most extreme form of fatigue is uncontrollable sleep, i.e. falling asleep against the will of the individual.

2.9 Training

- 2.9.1** The Skipper did not have any formal training in place for the crewman. He had assessed them during previous watches and was happy with their ability to keep watch.
- 2.9.2** There were no procedures in place to manage fatigue or formal instructions for watch keeping.
- 2.9.3** The Skipper/Owner failed to train his crew and document this in the SSM manual as required in the **New Zealand Safe Ship Management Code**: -

'...6.3 The owner should establish procedures to ensure that new personnel and personnel transferred to new assignments related to safety and protection of the environment are given proper familiarisation with their duties. Instructions which are essential to be provided prior to sailing should be identified, documented and given....'

2.9.4 The Skipper and Owner of *Poseidon* failed to fulfil their responsibilities as required under **Maritime Rule Part 31 C.16 Watch keeping Standards**

(1) *The owner and the Master of a fishing vessel must establish and implement Watch keeping procedures addressing:-*

(a) *for navigational watch keeping*

- *the composition of the watch*
- *the fitness for duty of watchkeepers*
- *navigation planning and duties*
- *the use of navigational equipment*
- *lookout duties*
- *the notification of the Master of any change in weather conditions*
- *the protection of the environment*
- *navigation with a pilot on board*
- *any characteristics of the fishing vessel that may affect safe navigation*
- *keeping an anchor watch*
- *radio watch keeping*

(2) *The crew of a fishing vessel must comply with the watch keeping procedures established under Rule 31C.16(1).*

2.10 Inspections and Audits of the Vessel

2.10.1 The last flag state inspection of the vessel was conducted at Tauranga on 21 May 2003 by the local Maritime Safety Authority MSI (Maritime Safety Inspector). No deficiencies were noted at that time.

3. CONTRIBUTING FACTORS

N.B. These are not listed in order of importance.

- 3.1 Crewman 'A' being fatigued.
- 3.2 Crewman 'B' not rising when woken and crewman 'A' not going back down below earlier to make sure he was awake.
- 3.3 The Skipper did not set any waypoint alarms or watch-keeping alarms.
- 3.4 The Skipper /Owner not having in place procedures to identify the risks and appropriate responses to any risks identified.

4. CAUSE

Human Factor

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Failure to comply with regulations | <input type="checkbox"/> Drugs & Alcohol | <input type="checkbox"/> Overloading |
| <input type="checkbox"/> Failure to obtain ships position or course | <input checked="" type="checkbox"/> Fatigue | <input type="checkbox"/> Physiological |
| <input checked="" type="checkbox"/> Improper watchkeeping or lookout | <input type="checkbox"/> Lack of knowledge | <input type="checkbox"/> Ship Handling |
| <input type="checkbox"/> Misconduct/Negligence | <input type="checkbox"/> Error of judgement | <input type="checkbox"/> Other . . . |

Environmental Factor

- | | | | |
|--|---|------------------------------------|--|
| <input type="checkbox"/> Adverse weather | <input type="checkbox"/> Debris | <input type="checkbox"/> Ice | <input type="checkbox"/> Navigation hazard |
| <input type="checkbox"/> Adverse current | <input type="checkbox"/> Submerged object | <input type="checkbox"/> Lightning | <input type="checkbox"/> Other . . . |

Technical Factor

- | | | |
|---|---|---|
| <input type="checkbox"/> Structural failure | <input type="checkbox"/> Wear & tear | <input type="checkbox"/> Steering failure |
| <input type="checkbox"/> Mechanical failure | <input type="checkbox"/> Improper welding | <input type="checkbox"/> Inadequate firefighting/lifesaving |
| <input type="checkbox"/> Electrical failure | <input type="checkbox"/> Inadequate maintenance | <input type="checkbox"/> Insufficient fuel |
| <input type="checkbox"/> Corrosion | <input type="checkbox"/> Inadequate stability | <input type="checkbox"/> Other . . . |

- 4.1 The watch keeper fell asleep after his relief failed to come to the wheelhouse.
- 4.2 The Skipper failing to recognise the symptoms of fatigue in one of his crew.

5. OPINIONS & RECOMMENDATIONS

5.1 Opinions

- 5.1.1** The Skipper/Owners had a very ad hoc attitude to bookwork and formal procedures. There was nothing to suggest that the Skipper had given any formal training to his crew.
- 5.1.2** The Skipper was aware of the positive safety aspects of a watch-keepers alarm, but had yet to fit one in the vessel.
- 5.1.3** There were reasonable time periods where some the crew could get some quality sleep. The Skipper was not aware of any fatigue issues and how to manage these in a safe manner.

5.2 Recommendations

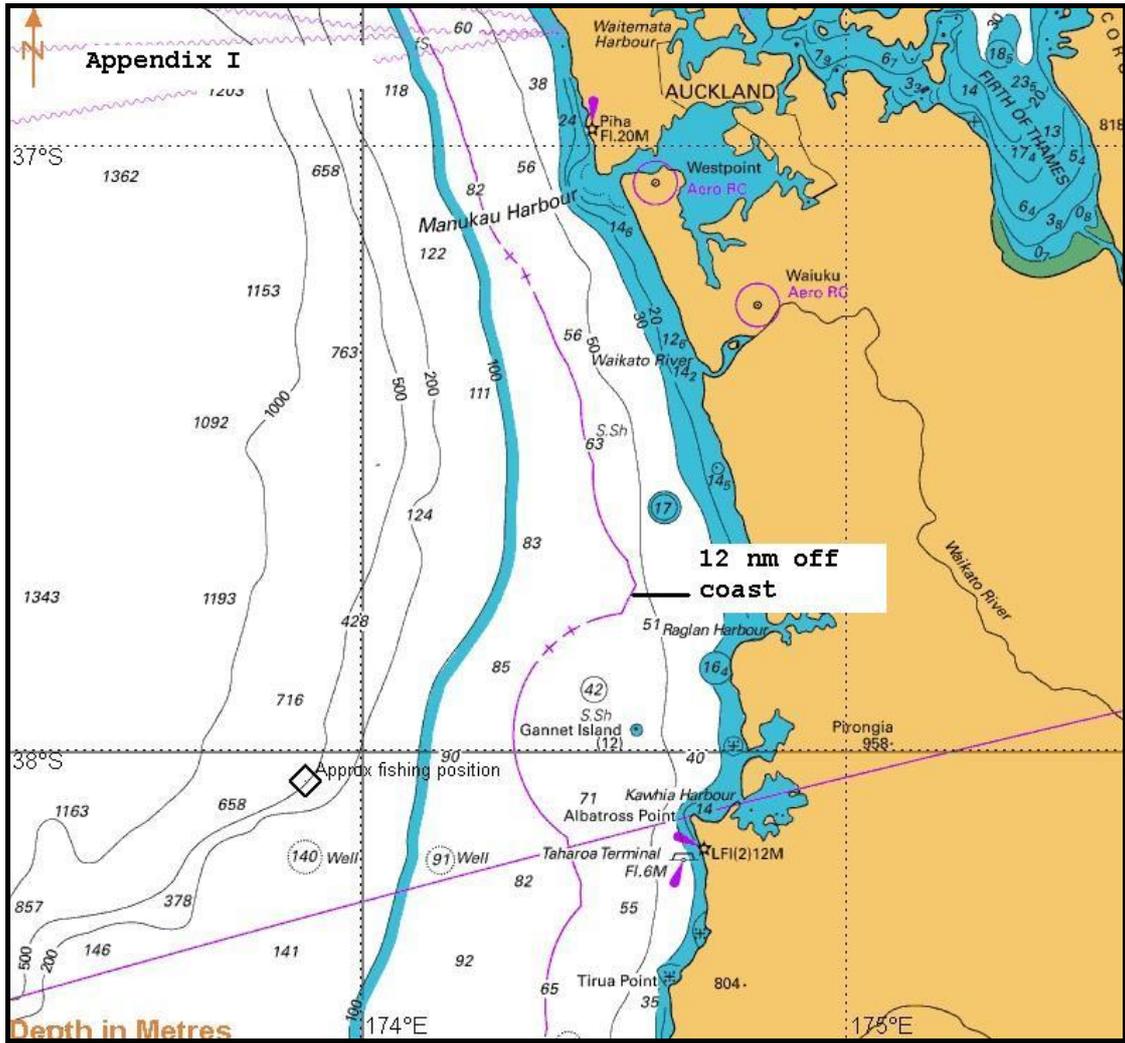
- 5.2.1** That the Skipper be censured for his failings regarding the training and procedural issues raised in **2.8.7**, **2.9.4** and **2.9.5** above.
- 5.2.2** That he be further censured for his failure under Maritime Rule Part 22.5 to maintain a look out when the vessel was hove to.
- 5.2.3** That Poseidon Fishing Company Limited fit a watch-keeping alarm to the vessel. *It is noted that at the time of finalising this report, **Poseidon** is no longer owned by this company and this Recommendation has not been implemented.*
- 5.2.4** That the Skipper and Owner of **Poseidon** in conjunction with the SSM Company prepare, for inclusion in the vessel's Ship Safety Manual, clear and unequivocal procedures for the skippers and crew regarding fatigue and the requirements for watch-keeping standards in accordance with sections 31C.15 and 31C.16 of the Maritime Rules. *It is noted that at the time of finalising this report, **Poseidon** is no longer owned by this company and this Recommendation has not been implemented.*
- 5.2.5** That the Skipper is prosecuted under section 68 (2) of the Maritime Transport Act for operating the vessel outside the limits of his maritime qualifications.
- 5.2.6** That Poseidon Fishing Company is issued with an improvement notice under sections 6 and 8 of the Health and Safety in Employment Act. *This recommendation has been carried out.*

- 5.2.7** It is recommended that this report be distributed to ‘FishSAFE’ members and that significant weight be given to the preparation of guidelines/ best practise for the usage of watch-keeping alarms on board fishing vessels.

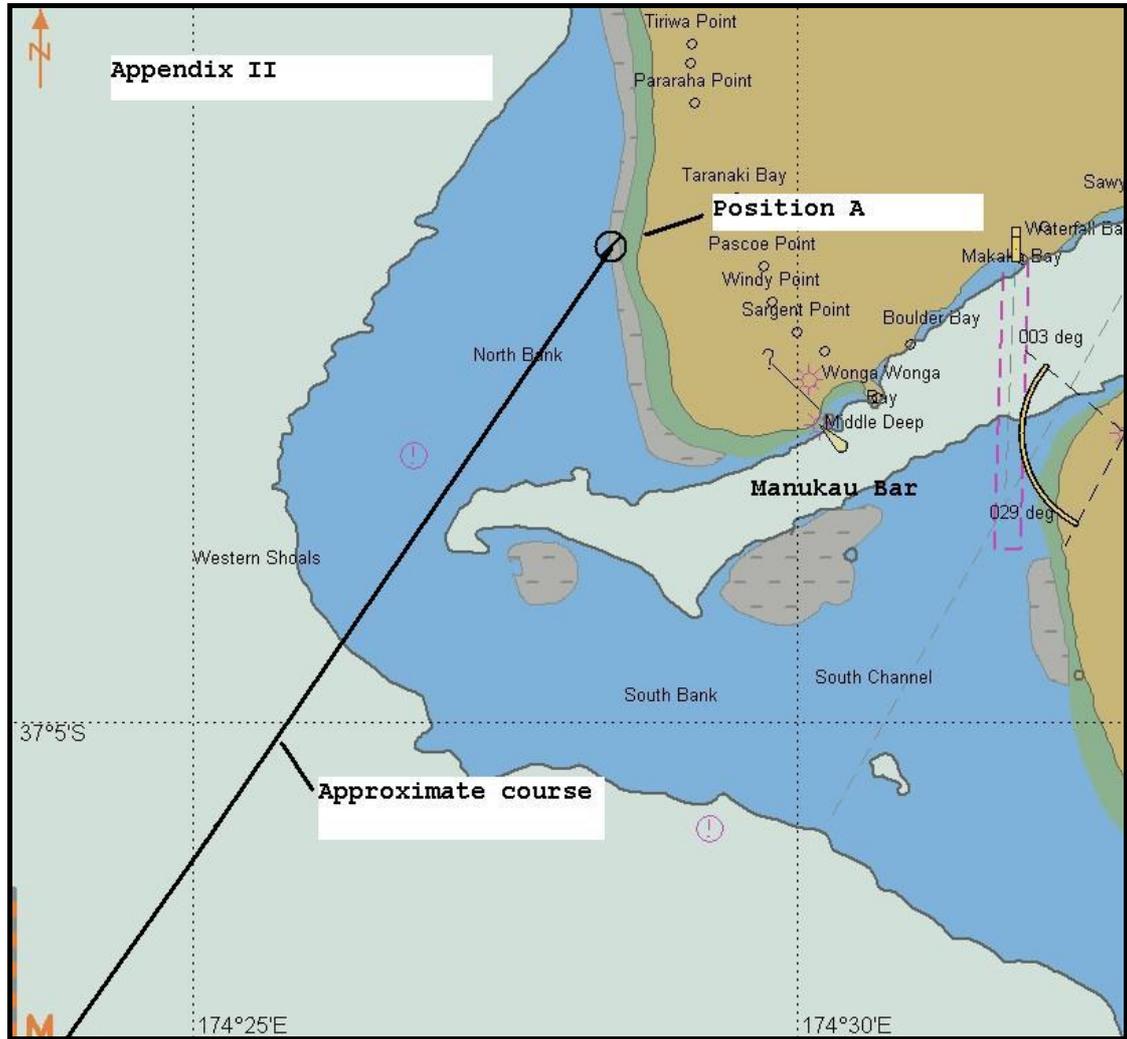
6. ACTION TAKEN

- 6.1** The Skipper of *Poseidon* was prosecuted under section 68(2) of the Maritime Transport Act 1994 for operating the vessel 38 nautical miles from the coast whilst only holding a Commercial Launchmaster Certificate. He was convicted and fined \$750 and ordered to pay \$330 in Court & Solicitor costs.

APPENDIX I



APPENDIX II



APPENDIX III

