APPENDIX 3

Summaries of Interviews Conducted with Yacht Crews

Appendix 3

The 28 yachts chosen to be formally interviewed were selected on the following basis:

- All yachts involve in SAR.
- All yachts having fatalities.
- A selection of different sized yachts that finished.
- A selection of different sized yachts that retired.
- A selection of yachts that sought shelter and continued on to Hobart after the storm.
- Four boats with high/low stability indices.

The following yachts were interviewed (written interview summaries for each yacht have been included):

- AFR Midnight Rambler
- Aspect Computing
- Atara
- Ausmaid
- Avanti
  B52
- Bright Morning Star
- Brindabella
- Business Post-Naiad
  Canon Maris
  Indian Pacific
  Jubilation
  Kingurra
  Loki
  Margaret Rintoul II
  Midnight Special
- Miintinta
- New Horizons
  Polaris
- Solo Globe Challenger
- Sword of Orion
  Team Jaguar Infinity II
- VC Offshore Stand Aside
  Veto
  Waitangi II
- Wild One
- Winston Churchill
  Zeus II

Summary of interview with the crew of AFR Midnight Rambler.

Conducted by Roger Hickman at CYCA, 11th Feb 1999

Present

Ed Psaltis (skipper), Arthur Psaltis, Michael Bencsik.

Crew Experience

Their major emphasis was on the fact they had sailed together for along time, over a long time. The procedures on the boat were well practiced and thus well known. They believed polices and procedures were a major factor in the fact there was no panic on the ship. They also emphasised that they knew each other very well and therefore new of each other's strengths and weaknesses. Over half the crew had been together since the Nu Zulu days and had competed in the 1993 Hobart race (retiring due to an injured crew person). This group put a lot of importance on Fitness and Training. All the crew were expected to reach a good level of fitness. All were aged between 35 and 45. Gym work outs were held as a group. The single reason for this was that if the weather got bad fitness is a huge advantage.

Catering.

Generally over catered. All food was pre prepared rolls and sandwiches were made and frozen. No hot drinks were served. The feeling was that they did not eat correctly, However there was plenty food yet no one felt like eating much any way. The comment was that there was no simple food ie-dry biscuits etc that could be eaten that would not induce seasickness,

At 2000 hrs on the first night food was taken then nothing for 2 days was the general consensus. They believed not enough water was drunk and perhaps they got dehydrated. There was plenty on board just no desire or discipline to drink.

Pre Storm.

The boat preparation was good. The boat was new and a through pre race checks went on in the weeks leading up to the race. The start was straight forward, as was the run down the coast. The navigator was experienced at reading weather maps and also listening out to all radio weather reports. They were well aware of the 50 plus gale that was heading or building up to the south. Telstra Control and VHF 16 were the main source of weather information.

Storm

Around 0100 27th Midnight Rambler gybed having taken down the spinnaker some time earlier. As the wind increased over 35 true and two broaches lead to the removal of the spinnaker. By daybreak the vessel had 2 reefs in the main and the storm jib on with some 40 to 45 knot winds.

At 1000 the skipper felt the boat was underpowered and were thinking of putting on more sail. They held off putting more sail up. The crew was in good shape and keeping normal watches.

At 1200 the secondary storm hit with winds gusts of 60 Knots. They ran at approx 150 degrees apparent, took the mainsail down and replaced it with the trysail. The main sail was rolled up on the boom with plenty of sail ties. As they came on the wind they realised they had far too much sail on and thus removed the trysail. They crew were glad of the extensive storm sail training they had undertaking when they recently purchased the boat.

By 1300 hrs the storm had intensified and the watch system was changed to storm watches. It was at this time the safety equipment was brought out; harnesses put on, epirp's checked, liferafts checked etc.

At this time and about 50 south of Gabo a serious discussion took place between the management team on weather or not to retire or not. The vessel had suffered a 90-degree knock down and lost the wind gear from aloft. At this time a vessel (appeared to be a BH41) was seen heading on a reciprocal course and carrying a real "treat", yawing and rolling all over the place. Following this visual experience it was decide to continue in the same direction, as safe as possible with the wind and sea at approx 60 degrees on the bow.

At 1410 hrs during a watch change an accident below decks causing a person to be concussed. Lack of hand holes and lack of experience moving around below decks of the crew member was believed to have caused the accident. The navigator was experienced in first aid.

A Tight watch system was maintained, care was taken to keep the internal water to a minium. The boat management was taken over by the co-skipper so Ed could focus on steering.

During the afternoon the boat suffered a second 90-degree knock down and on both occasions the helmsman was washed down the deck.

The boom was lashed to a stanchion base and twice became dislodged.

At dusk the wind reduced to 35 to 45 and racing resumed as best as possible. A long fresh night followed.

The crew were very tired and they believed their fitness was very valuable. There was never a leadership issue. Braces and sheets were left out; they did however often end up over the stern of the boat. A crewmember carried out routine hull inspections.

Lessons to learn.

It was felt that in 65 knots plus of wind the storm jib was too big.

When people came down below they must get into a bunk. Often is the case a person is to tired to get into a bunk and simply lies on the floor. This is not safe, as persons become a missile below decks.

The safety drill prior to the race is vital. Eat and drink when ever possible.

Summary.

This crew were drilled in setting storm sails. They maintained watches, and acted cautiously and safely. They should have taken more nourishment. They were attentive to the radio. They maintained speed on the boat and endeavoured to attach the sea at about 60 degrees apparent.

INTERVIEW WITH "ASPECT COMPUTING" CREW

on 13/2/99 (cyc)

DRAFT

Interviewer: Richard Hammond

Attendees: David Pescud
Danny Kane
Harald Mirlieb
Sandy Collins (F)

Three other crew arrived later, 2 female/1male.

As with all boats they had a fast ride before a fresh nor'easter until just after midnight on 26th, and anticipating a Southerly change they shortened sail to a No.3 and 3 reefs. The change took quite a time to build and they were under-canvassed a lot of the time.

Initial wind strength about 35 knots from the South then slowly went to 245° and 250°, wind strengthened to50-65 knots, maybe 75, but lost instruments. Sailed with a storm staysail and nothing else. Had used this rig before and knew its capabilities. Nobody on rail and no stability problems. High wind lasted 24 hours from 0300 Sunday until 0300 Monday. Only damage, lost a spinnaker pole and cracked welds on stanchion Ronstan pads.

Prior to the race they had a training day with their storm gear so that all crew were familiar with the sails and the tacking and sheeting positions. Also had a safety night to confirm procedures, familiarity with radio, grab bags, life rafts, went to R.F.D. day on life rafts. Each crew member had a bum bag which contained a personal EPIRB, strobe light, knife and wine cask bladder. In all there were 13 individual EPIRBs and another 3 on board, one of which was lashed to a torch. No EPIRB in raft.

They were 40 to 50 miles into the Strait and were considering whether they should turn back, but they would not have attempted going back at that time as they considered it more dangerous going back than forward. They slowed the boat down and kept going South and conditions improved, wind going W/NW and they

increased sail to No. 2 then No. 1 light. Becalmed off Maria Island then a gusty NW into Storm Bay and to the finish. Morale was terrific at all times, very little seasickness, no panic.

Most of the crew had experienced 4 days of similar weather when returning from Lord Howe Island 2 or 3 years ago in which they used the same rig as in the Hobart. 3 to 4 knots of current and 50 knot winds for 4 days. They consider that sail from Lord Howe confirmed the rig for the Hobart blow which was a storm staysail. Man overboard drill was carried out prior to the race.

They had a lot of seamanship aboard and also a lot of experience in bad conditions. In this race they carried 13 crew, 4 were newcomers and 9 had considerable experience. At least 4 were female of whom the skipper spoke very highly as to their all round performance. They carry a construction worker's helmet in case someone has to go up the mast.

Complimented Len Carter on his role on Telstra Control.
Considered pulling out a sign of good seamanship.
No. 1 priority is training and preparation.
Firing flares - how do we do training?
Demonstrations and practice with use of life rafts.
Instruction with using flares.
Considered weather forecasting OK.
Critical of CYC communication to relatives.

I did not have access to the detailed report "Aspect Computing" submitted and this result of my interview with the crew needs to be read in parallel with their submission.

They did not have a sextant on board but did have 2 GPS - one being a stand alone and recommended that the stand alone be activated, say, every 3 hours.

I consider their boat had been very well prepared and crewed with experience and competent people. Their attention to detail was of a very high standard. 7 crew attended the interview.

Richard Hammond

CREW INTERVIEW – ATARA
Sydney 13/2/99

Attendance: R.Hickman, D.Montgommery, M.Slinn, R.Holstein, D.Logue, S.Gordon, S.Green.

1. Boat well prepared with an experienced crew having extensive offshore experience. Strict buddy system on board with excellent briefing re safety and stowage of equipment. Had carried out procedures for heavy weather sailing as practice. Good pre-race planning including weather. Crew discussions and consensus re safety.
2. Boat & crew performed well. Hard running on first day, broached late pm and removed spinnaker. Change in sea conditions and wind. Went to jib top with a high clew, remained with full main, boat very comfortable. Early am Sunday 27th, hit cold air, main went aback so changed to #4 and reefed main. Boat on wind @ 40-50 degrees apparent.
3. Sunday am - boat overpowered; removed mainsail which was rolled, secured and covered on the boom. Hoisted trisail and removed #4 headsail. Heading 170, winds freshening to 45 kts, seas 7 to 8 metres. At around midday, boat was overpressed so removed trisail and hoisted storm jib. Jib sheets attached with J locks and sheets found to be too short. ***Need to ensure jib sheets long enough and sheets to be sewn onto clew.*** Boat progressing southwards, boat jumping off waves, still over-pressed, changed upslide and twisted sail – boat comfortable. Crew gear-bags not stowed properly on cabin sole in water. Decision to maintain in-experienced and young crew below at all times. Two or three people on deck in full safety gear with instructions to clip safety harness to strong point before exiting from hatch. Cabin sole cleared of all sails and equipment. Spinnaker pole lashed to centreline of boat and found to assist foredeck crew in foredeck operations.
4. Sunday pm – wind and seas increasing, removed all sails – boat under bare poles. Seas breaking on deck, waves very steep, green water over boat, hoisted storm jib to control boat. Mid-afternoon, seas and wind abating. Boat was easier to control under storm jib only.
   Monday am – under storm jib then to #4 and 2 reefs in main as weather abated. Sail changes as required on progression to Hobart.

Comments by Crew:

1. Pre race documentation good.
2. Sailing Instructions to be available one week prior to the Race.
3. Review of age limit for participants. (Boat had a 15 yo on board.)
4. No problems with radio schedules. Nav station to be screened to stop ingress of water.
5. Operator error caused automatic activation of SatCom C emergency signal, resulting in overfly by aircraft.
6. Recommend discussion re outside assistance with respect to weather reports.
7. Reduce size of storm sails.
8. Storm jib sheets to be sewn on permanently – no J-locks. Ensure long enough to reach winches if flogging forward.
9. Do not lash spinnaker pole across foredeck hatch.
10. Waterproof handheld VHF.
11. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
12. Concern over whales.
13. Review of crew experience and crew fitness.
14. Requirement for a long race prior to Sydney-Hobart race.

G.W.Halls

CREW INTERVIEW – AUSMAID
Adelaide 4/3/99

Attendance: C.Evans, C.Gordon, T.Edkins, K.Pearce, P.Manthorpe.

1. Boat well prepared with an experienced crew having extensive offshore experience. Imported experienced yachtsmen (Whitbread Race) to supplement crew. Yacht broke rudderstock on delivery voyage to Sydney prior to the race. Replaced in Sydney. Had carried out procedures for heavy weather sailing as practice. Crew to wear harnesses in >25 knots, personal strobe lights at night. Good pre-race planning including weather. Crew discussions and consensus re safety – mental approach. Designated safety officer.
2. Boat & crew performed well. Hard running on first day – 1.5oz. kite plus full main till 0100/27th. During jybe, leeward runner demolished HF and VHF whip aerials. Change in sea and wind conditions Went to #4jib plus 1 reef in main, as wind increased 0200/27th second reef in main. At daylight changed to storm jib ***(fixed sheets)***. Around midday wind >70 knots, removed and stowed main. Spinnaker pole lashed to centreline of yacht ***(prevented access to forward hatch)***. Yacht had additional internal handholds below. Yacht reaching south 170°, sprung sheets, boat very comfortable, suffered one knockdown to 80°, plus injury to crewmember. Lost JonBuoy.
3. Monday am – under storm jib then to #4 and 2 reefs in main as weather abated. Sail changes as required on progression to Hobart.
4. Missed two skeds, did not put in Declaration. Did not see any other yachts from beginning of storm till down Tassie coast.

Comments by Crew:

1. Pre race documentation good.
2. Sailing Instructions to be available one week prior to the Race.
3. 93 Race was harder.
4. Review of safety harnesses, mainly tethers and clips.
5. Yacht stanchions and lifelines, lashings 2mm vb cord.
6. Do not lash spinnaker pole across foredeck hatch.
7. Waterproof handheld VHF.
8. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
9. Review of crew experience and crew fitness. Crew standards low.
10. Review of weather forecast procedures – storm warnings.
11. Yachts to have full structural survey before competing in Cat 1 events.
12. Pre-race questionnaire to include queries re last man-overboard, fire and damage control drills.
13. 406 EPIRS compulsory.
14. Extremely critical of Internet access. Families requesting information given 'cold shoulder' or straight out lies.

G.W.Halls

AVANTI – Interview conducted by Peter Bush on 13th of February 1999 at the Sandringham Yacht Club at 0930hrs

Present: John Mooney

Crew experience:
This crew had members from very experienced (20+ Sydney to Hobart) to novice. They set out with the intention of completing the race without damage and would sail the boat accordingly.

Boat preparation:
The AVANTI had not seen a lot of sailing miles, and had been purchased some 12 months prior to the race. Considerable effort had been put to preparing the boat especially for the event, including new rigging and sails during Nov/Dec. 1998.

Conditions prior to the storm:
AVANTI had been enjoying the surfing conditions down the Cost, with a competition between helmsmen for top speed. They were assisted by a current they estimated to be running at about 3 knots.

Early in the first night, they broke the boom, and as it was regarded as unrepairable, were forced to set the tri-sail. They rolled up the main sail and stowed it below deck. They continued under tri-sail and a furling headsail - "travelling well".

Conditions during the storm:
As the front began to move across the fleet, they heard SWORD OF ORION's call of 80 knots winds and determined that they should prepare the boat for heavy weather. They removed the tri-sail, lashed the roller furler to the rail so it could not come undone, and put ties around the lower part of the furled headsail.

The strong breezes hit AVANTI at 1400 and reached their strongest soon after. The helmsmen controlled the boat by keeping it feathered, but kept the headsail powered, steering a course of 170-210, and making good 180.

The boat was kept fairly dry, and only one person on board became seasick.

AVANTI encountered 3 especially big waves in the course of the storm, each approx. 25% bigger than the average seas. Two of these were in daylight and one in darkness. These bigger waves had the effect of 1/3 of the wave breaking over the boat, the first two were taken bow on with a boat speed of 4-5 knots. The third hit beam on, and AVANTI was knocked down to 135-140 degrees and pushed down the wave on its beam ends, mast first. Due to the angle of the wave face, the mast was never in the water. The crew on deck were nonetheless submerged for some seconds.

Below deck, cupboards were opened and emptied into the cabin. This took some 30 minutes to tidy up. Spirits remained high after the knockdown,

largely because they had determined that the storm would move and start to abate within a few hours, would be a spent force within 24. (The weather did improve in fact as per their predictions).

The crew was adamant that continuing to sail into the waves was by far the safest option, and the best way to manage the big seas. They considered turning around to be a more perilous option.

Throughout the storm, the crew continued to stand watches, prepare food and eat, and were not overtired.

Recommendations from AVANTI:

- Self light strobes both filled with water, questioned quality
- Harnesses should have 2 clips (or 2 strops) to enable moving around on deck without ever being unclipped
- RRV did "an outstanding job"
- Cannot say thanks enough to SAR people
- Used furling headsail in all but the most extreme conditions to regulate power proved very useful, and safe as did not have to move crew forward (note: were able to reef to smaller than storm jobs)

Key learnings from interview:

- Well prepared boat and crew
  Contending with the seaway and big waves was the issue rather than the winds
  Being prepared for the extreme conditions prior to them hitting put them in a very strong position
- Actively sailing the boat and keeping sufficient height and power was essential in their heavy weather strategy

CREW INTERVIEW – B52
Townsville 23/2/99

Attendance: W.Millar, J.Bryant, W.Oxley, L.Axe, M. Vickers, R.Kingston, S.Anderson

1. Boat well prepared with an experienced crew having extensive offshore experience. Majority of crew had done Lord Howe Races, Sydney-Maloolabah, Brisbane-Gladstone, Hamilton Is Regatta, Port Douglas Regatta and Cairns-Port Moresby races, plus previous Sydney-Hobarts.
2. Good pre-race planning including weather and input of navigation way points into vessel GPS and hand held GPS.
3. Boat & crew performed well prior to storm, with boat well positioned. Prior to weather change, good run down the coast. Changed to #4, 1 reef prior to wind increasing. As wind increased changed to storm jib and trisail. All crew-on watch and off-watch in wet weather gear and safety gear when wind > 50 kts.
4. Boat overpowered; difficult to maneuver boat through waves as response to helm was sluggish so removed trisail. Boat was easier to control under storm jib only.
5. Prior to height of storm removed storm jib but could not control boat. Reset storm jib. ***Storm Jib needs to be reduced in size. Problems with storm jib and foil, twisted. Jib sheets permanently attached.***
6. Secured deck gear, sheets and braces remained on deck, pole lashed to centreline of boat. ***Caused problem after roll-over as could not exit forward hatch.*** Boat rigged with internal hand line running for and aft as additional safety item (*recommended*). Two crew on deck, remainder below resting as best they could, crew discussions re weather, consensus and moral good.
7. Seas were very confused. NW to SW waves to 15 metres. Boat picked up wave on quarter and overturned.
8. Boat remained inverted for 4 to 5 minutes. Water in cabin 0.8m high, sails, liferaft, 8 crew and misc. items. Floor boards secured. Not sure if mast broke above gooseneck during roll or whilst inverted. Two crew overboard, one forward one aft, thought they saw mast lying horizontal in water immediately after inversion. Crew in cabin discussing abandon ship procedures, had difficulty in exiting main hatch due to buoyancy vests and flotsam. Crew could not exit forward hatch - ***spinnaker pole lashed to centreline of the boat prevented hatch being opened.*** Some confusion below - WM tried to use VHF underwater and inverted to send mayday.
9. Boat rolled upright. Overboard crew climbed on-board. First priority was to remove rig. WM split crew into two parties, one removing rig, the other bailing and securing integrity of the boat. Pulled split pins on stays, cut halyards etc with hacksaw. Disposal of rig took 15 minutes, bailing of boat and stopping ingress of water into the cabin took 2 hours. B52 had an additional manual bilge pump installed below. Triggered vessel 406 EPIRB – confirmed by AUSAR. Triggered personal GME 121 EPIRB but antenna would not extend. ***Split pins on stays not to opened more than 30 degrees; double tethers on personal harnesses; review clips on harnesses; localised man-over-board system.***
10. Sighted aircraft and released red parachute flare (2050 hrs). ***First flare failed to ignite-this was a new flare recently purchased.*** Aircraft circled and then departed. Unable to communicate with aircraft as all radios and batteries dead. Approximately 1.5 hours later a helicopter was sighted and a red smoke flare deployed. Helicopter overhead.
11. WM assembled crew on deck and advised helo of status by head count and indicated head injury to one crew member. Comms with helo crew not understood. Helo had problem with winch wire (snapped) and deployed a note in a plastic bag which was recover on B52. Note was on plain paper and completely illegible and in 50+ pieces due to water damage. MW wanted to get injured crewmember to helo to advise of current status-unsure whether to turn off EPIRB. ***Wet notes; waterproof handheld VHF; gel-cell battery; education re rescue procedures.***
12. Helo departed. Crew moral fair. Secured boat and managed to start engine. Crew changed into dry clothes, ate and a watch rotation system in place. Proceeded towards Eden, arriving pm the following day.
13. Vessel suffered major structural damage due to deck imploding. Hatches and windows then unseated, unable to insert storm boards. Review of deck scantlings.

Comments by Crew:

1. Pre race documentation good. Because of yacht/crews sailing programme and being an interstate yacht mail system unreliable. Should get documents on Internet.
2. Sailing Instructions had missing pages.
3. Could not get inside door at briefing due to large numbers of people.
4. Sailing Instructions to be available one week prior to the Race.
5. Review of age limit for participants. (Boat had a 15 yo on board.)
6. No problems with radio schedules.
7. Recommend discussion re outside assistance with respect to weather reports.
8. Reduce size of storm sails.
9. Storm jib sheets to be sew on permanently – no J-locks. Ensure long enough to reach winches if flogging forward.
10. Do not lash spinnaker pole across foredeck hatch.
11. Two tethers on safety harnesses..
12. Review clips on safety harnesses.
13. Review personal flotation equipment.
14. Waterproof handheld VHF.
15. V Sheet useless in gale conditions.
16. SeaRugs a godsend.
17. GelCel battery for emergency.
18. Engines to have a decompression lever and manual start ability.
19. Review localised Man Overboard system, crew sling and locator system.
20. Review crew age limits and experience.
21. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
22. AUSAR or helicopter rescue personnel to carry out briefing at Race Brief.
23. Manual bilge pump installed below.
24. JonBuoy lost overboard regarded as useless.
25. Review stowage of liferafts. Difficult to get from below if injured and minimal personnel available.
26. Crew had carried out man overboard practice in Clevland Bay prior to departure for the race.
27. Review personal information system to public and crew member families. Hobart/Sydney system did not work. Families and personal friends given misleading and non-factual information when able to contact CYCA and authorities.

G.W.Halls

INTERVIEW WITH "BRIGHT MORNING STAR" 25.2.99

Interviewer: Richard Hammond

Attendees: Hugh Trehearne
Ian Trehearne
Shaun

Most of the crew had sailed on a long race in "Bright Morning Star" prior to the Hobart. An experienced South African joined the boat for the race. The crew, with the exception of Hugh and Ian who took alternate watch captain roles, were new to this race. Experience was gained on Lord Howe, Southport, Mooloolabah, and long cruises. There are certain insurance requirements for this type of operation and it is necessary to have competent crew aboard.

Safety familiarity and briefings on use of life raft and flares are held on board on special preparatory outings.

Both Hugh and Ian are as good as you get, very observent with great eyes for detail, and they have been in all types of weather and are basically sailing full time. I have sailed many races against and with them both and they are "the best".

They talk through all their procedures with their crew, such as man overboard, life raft procedure, safety and the like as they don't have their crew together all the time. They do this with the "blue" book step by step. They have a training day.

They regard the race as an adventure and an adventure to get there.

They do not overpress the boat and they attempt to change sails early to avoid pressing the boat to the limit. It is what they refer to as the cautious way, and don't press with spinnaker and wing out jibes due to the make-up of the crew.

It is difficult for them to get the crew together. They do not have personal EPIRBS. They carry personal strobe lights, harness and life jackets. Hugh is adament that the correct way to pick up a man overboard is a figure eight manoeuvre.

Before the Storm

Sailed as the other competitors and they damaged their spinnaker. Jibed and set up for Southerly change. Two reefs and No. 4 and stayed in that mode in moderate variable wind for 3 hours before the real blow.

Hugh was very critical of the weather forecasting and doubted that the forecast related to where the boats were at 1404/27 - they recorded 55 knots. Although he or they only listened to Telstra Control they are now aware that there were reports of 90 knots at Wilsons Promontory.

In summary, he considers a forecast designed to allow yachtsmen to get a better overall appreciation of the weather and cover an area further to the West and indicate in the one forecast local station reports as far West as Apollo Bay in Victoria, and say Flinders, King Island and down the East coast of Tasmania. In this race the forecast did not give us a good picture of what was going on in the West.

During the Storm

Wind strengthened and we reduced sail - 2 reefs and No.4. In Lord Howe trip and return same seas, and have found it too dangerous to go to the foredeck. We lowered main then sailed East, put in a deep reef and still overpowered without jib. Boat overpowered and bow being pushed off.

We did not have enough speed to sail through seas and this caused us to be pushed sideways with a huge wave which laid her down with mast below surface of water. She recovered quickly but it resulted in injuries to 3 crew members who suffered cracked ribs. We needed a trisail and storm jib for manoeuvrability and sailed at 60° to the wind and at a safe and fast speed to enable us to luff through the seas; wind now 68 knots.

From 1800 to 2359/27th wind continually never below 60 knots. Our small sails are 60% of the area required by the rule.

Because of our inability to rig the boat properly for the conditions, and the crew injuries, we elected to retire and head for Eden under motor and bare poles, arriving in Eden the morning of 28th. Because of commitments in Hobart, we stayed in Eden for 24 hours, cleaned up the boat, then headed for Hobart in a 46 knot

Westerly breeze which moderated after a period and we then motor sailed to Hobart. We found the fuel limit was more than needed.

Summary of important points raised

- Weather reports were not specific enough for the Hobart race and were not accurate. They only used Telstra Control and did not have a full time navigator. This whole procedure of weather information needs a good look at. There was information available from Wilsons Promontory where observations of 80+ knots were recorded and for some reason this information did not filter through to all yachts.

  Radio schedules were very efficient.

- The CyC looks after the yachts at the start, the RYCT at the finish and the in-between you look after yourself.

  The size of the small sails should be looked at, they should not be too large.

- Quite serious injuries were sustained when yacht rolled down to just over horizontal.

- All yachts should have captive mainsail luff slides so as to control the lowered main plus a separate track with captive slides for the trisail. All storm sails should be stopped strongly before hoisting after which sheeted in to break stops.

  Roger Badham should provide weather to all boats for the entire race!

- Sailing technique - run East, lower main, set the trisail and storm jib then sail at 60° to the wind for safe fast speed to be able to luff through the big seas and be able to keep control of the boat.

Richard Hammond

Record of Interview
"*Brindabella*"
February 16, 1999
CYCA
Howard Elliott

Present
Jacko (?)
Geoff Cropley
Tony Herder
Lindsay May

Brindabella has 3 full time paid hands who look after the boat. The crew is very professional and stable throughout the season. Leading up to the race a crew fitness program was held with regular attendance by all the crew. A private trainer was hired to organise this. Alcohol is banned for prior 24 hours.

The crew has been selected over a long time with specific attention paid to eliminating seasickness and increasing quality/experience. Min experience was 2 Hobarts, max experience was 25 Hobarts. The Blue Water series was the primary lead up but did not do Lord Howe – did Hamilton instead.

Navigation pre race planning starts 1 month out. Noted strong currents. Sourced info from Hydrographic Office, Fishermen, BOM. Used Roger Badham as weather consultant.

Rig is completely removed and checked prior to the race. Preventative maintenance is rigorous and detailed. Any item that looks like it is worn is replaced. All moving bits are cleaned greased etc. mast is x-rayed. Boat is kept in "Hobart Trim" all year round. There is crew meeting at the end of each race to discuss maintenance items etc.

Two weeks prior to race crew are issued with Info Kit. Includes info on diet, gear, safety and essential gear. Copy will be sent to the Review Committee. Fitness is emphasised. No MOB drill this year but regular MOB drills in prior years. Storm gear is treated as "just another sail" and is subject to the same drills as other sails.

All gear is loaded and stowed on board by the day prior. All non essential gear is removed from the boat by Xmas day. Only final fiddly bits and perishables are loaded from Xmas day.

Morale very high on race day. Weather briefing by navigator. Pep talk by Owner. Start and harbour exit went (almost) to plan.

First night went fine. Had reefed (to second reef) by 20:50. Broke kicker 21:00 and broached in middle of thunderstorm with wind 40kts. Lost 3rd kite at this point. Up to 28kts of boat speed during nite under spinnaker. 23:00 went to #5 and reefed (2).

Due to a damaged rudder bearing the boat was taking minor amounts of water (3-4 buckets per day) in the stern. This probably occurred earlier in the day when the boat struck a sunfish. The water was sloshing around in the stern and splashed on to the

rear of the radios during the broach. Radios(HF and weatherfax) now dead. Satcom was still working giving position reports. Minisat died due to antenna problem. VHF was working. Spoke to chopper. Tried calling Sayonara and Young Endeavor. Missed all skeds from that point on.

Wind swung to NW by 23:30. Then through to south after midnight.

06:00 27/12 3rd reef in main. Off Gabo. Wind 30kts and abating. ABC helicopter arrives to take pictures.

Wind continues to build during the day to a max of 62kts. "Situation normal" typical Hobart. Wind peaked around midday. Was 045 apparent. Track was 180. Seas 4m. Boat very comfortable.

No major concerns. Split main during day. Dropped on deck and hoisted a trysail. Repaired main. Remained in visual contact with Sayonara (both under foresail only). Breeze lightened off. Rehoisted the main. Split again later that night as breeze increased. Main was damaged due to the reefs not being secured. This was a conscious decision due to unsafe nature of working outboard to tie the reefs in.

Blew out #3. Sail was aloft and had to run before wind for 9 miles to recover sail.

Set off flare at 22:17 (as requested) and called Sayonara on VHF – no response. Noted the potential here to run out of flares if you were a smaller boat and needed the flares in a subsequent emergency.

Rounded Tas Is 07:00 and finished second. Annoyed at position. Did not think weather was bad as experienced by Brindabella.

Notes:

Bulked up on the medical kit. Insufficient for a large crew.

2. All crew had Stormy Seas inflatable vests. These were selected because they were wearable in ALL conditions. The crew wore them all the time. They are an approved PFD #1.
3. All crew own their own quality gear. None had personal EPIRBS but some have personal flares and light sticks. All have torches.
4. Harnesses are provided on the boat. Standard Bourke kit. Supplied carabena clips are being replaced (through attrition) with Gibb clips.
5. Helm has preset/permanent tethers. The crew are not told when to don harnesses – they are experienced enough to know this themselves.
6. There are 4 6man liferafts. No drills are carried out. Some of the crew have liferaft experience.

Issues/Comments.

1 Liferaft drill. Since they have to be repacked each year the boat should inflate them to drill.
2. Regular seminars required for flares, liferafts etc.
Organise a "flare off day"

4. Handed out seasickness tablets prior to bad weather.
5. Will address location and installation of radios to ensure waterproof location.
6. All boats should maintain permanent VHF listening watch at all times.
7. Will take a portable satellite phone next time.
8. Should use parachute flares for missed skeds rather than white HH. Better chance of being seen.
9. Radio skeds are too long, although noted that Australian skeds are significantly shorter than those overseas.
10. ABC should broadcast extreme weather forecasts on 702kHz.
11. The weather briefing came across as a "how to sail to Hobart" rather than here is the expected weather. Viewed as a "circus".
12. Additional weather briefing 07:00 on race day. Should have both Ken Batt and Roger Badham to give more "rounded" view.
13. Make strong representation to Aus Gov NOT to cease weatherfax.
14. Have an additional safety sked during the day.
15. Web site sucks.

BUSINESS POST NAIAD

Interview conducted by Peter Bush on 16th of April 1999, Shearwater, Tasmania

Present: Steve Walker, Matthew Sheriff, Peter Keats, Shane Hansen, Jim Rogers, Rob Matthews

Crew Preparation:

The BPN crew had sailed together for several years and completed in a large number of Bass Strait races. They claim to have considerable experience in winds over 40 knots, and in winds up to 60 knots. 5 of the 1998 SHYR crew delivered the boat to Sydney.

Yacht Preparation:

BPN had been raced consistently by this crew and was well prepared for ocean racing and the SHYR. BPN had competed in 2 previous SHYR as "Swuzzlebubble IV", and a number of Bass Strait races. The crew reported that the yacht had previously been in winds over 60 knots.

Conditions prior to the storm:

The crew had a conservative start, and set a spinnaker for the run south of Botany Bay. As they day progressed they set a heavier spinnaker (1-5oz.) as the wind increased to 20-30 knots.

They continued their conservative approach, and removed the spinnaker early, poling out a #1. This kept the boat going fast but under good control. They jibed at around midnight as the wind moved to the north and north-west, and could see lightening ahead and to the west and east of their course.

At about 0400 on 27/12 they removed the #1 and went to the #4 and two reefs, setting up the third reef lines in readiness.

They had a strategy of staying in the East Australian Current and by daylight were slightly wide in the thumb line in good current on sprung sheets. The crew was in good condition, and while not looking forward to the forecast "blow" knew that their boat was well prepared and they were experienced in the conditions that were forecast. Their interpretation of the forecast was that they expected a little more than the forecasted 55 knots, they remarked that they did not expect the seas they experienced.

At 1100 hours they had 25 knots plus WSW and could see a cloud bank ahead. By 1300 hours, this produced rain and hail and the wind rapidly increased 35 to 45 knots. Within the hour they removed the #4 and sailed only with the triple reefed main.

Conditions during the storm:

At around 1530 hours, an "all hands on deck" call was made to take the main off and lash it to the boom as a batten had pulled out the leech of sail. The winds had increased to 65 knots.

They put the storm jib up, and at 1600 hours with the wind around 65 knots. They could see clear sky to the west and thought these gusts were the worst of the front and that things would settle down, and ease.

The sea however was building but the boat was under "good" control at 65 knots. By 1650 hours the wind had increased to 75 knots and between 1700-1715 hours recorded gusts between 80-85 knots.

The storm jib came out of the head-foil on three occasions and it was tied to the forestay as a result.
The crew had discussion about the best course of action in the extreme winds. It was reported that skipper Bruce Guy was concerned that the yacht was going too fast, and being wiped out by the head and blown away as it crested waves, laying over at 45-50 degrees. Consideration was given to running before the storm but they were convinced that the yacht would have pitch poled in the waves. Consideration was given to going bare poles, but there was some hesitation in removing the jib as it would be different to heed up without it.

Winds were continuing to build and waves consistently raking the whole boat. The crew commented that "the jib was in control of us, not us in control of it". Guy took the decision to "try it under bare poles".

BPN continued to make 4 knots "about on course" under bare poles but was continuously washed sideways. Seas were described as big and breaking at the top (12-15 metres).

After some 15-30 minutes under bare poles at around 1730 hours, BPN became beam on to the seas and was a little sluggish to steer. A big wave with a big breaking crest slammed into the boat, and started it surfing sideways and rolling it through 360°. The yacht flipped quickly, rolled and was back on its keel within about 10 seconds.

BPN had been rolled sideways, dropped on tis cabin sides and top. The mast was broken, most bulkheads sprung, one window gone and the rest cracked. There was a fracture 2 feet long across the coachouse and a hole in the top of the cabin. Where the compass was fixed in the side-decks was cracked and the deck de-laminated.

Once righted, the water level inside was still below the floorboard's, but the crew was concerned that BPN was taking water, as it was observed streaming from the stern.

The rollover had emptied the contents of the freezer and this along with much of the crew and boat gear was scattered throughout the boat. There was a smell of diesel fuel, and concern that the fuel tank may be contaminated, or breached.

The 5 crew on deck were all washed into the water on the starboard side (with the mast) and were able to scramble back on deck within 1-2 minutes.

The crew below came on deck to assist in clearing up the rig which was lashed on deck.

The crew reported no panic, and a calm business-like approach to matters at hand. They were nonetheless anxious. They were also concerned about the cracks in the deck and broken bulkheads. "The boat was a wreck".

They set up a spare VHF aerial and transmitted May Days on VHF 16 and HF 4483, activated their EPIRB which they placed in a sheet bag, just inside the companionway, so it would not be lost.

After cleaning up the boat, the crew attempted to start the engine which started on the 3rd try. The GPS was working intermittently and they adopted a strategy of trying to get into the lee of the land, a course of 290-300 degrees. (although steering this, they reported making north at about 2 knots). However, as the GPS was intermittent and paper charts destroyed, it was difficult to plot (or know sic) progress. They estimated their position to be about 10 nautical miles S/SE of Gabo Island.

Seas continued to get bigger and the crew reported that it was noticeable that BPN was more prone to roll without the mast.

The crew adopted a 2-on deck system of short watches, as they motored at low revs on their course. The propeller was reported by crew below as cavitating a lot – but this could not be heard on deck.

BPN made a request to the RRV for a chopper to take off three crew (injured and hypothermia) and for a boat to stand by.

The action of the yacht in the seas caused the crew to become increasingly concerned that BPN would be rolled again. They continued to be tossed by big waves.

They had flares out and ready, life jackets on and the life rafts ready at the bottom of the companionway.

At 2255 hours (with Skeggs & Matthews on deck), BPN was rolled for the second time. They were harnessed on the port side with their backs to the weather, with one calling out the compass reading to the other. White out conditions made it impossible to steer the course they wanted, so they steered the safest course up into the waves "by feel".

A breaking wave wiped the bow out quickly and bounced the boat sideways some 200 metres. It "fell upside down", right at the end of the impact. The boat was "surfing on its roof".

BPN remained inverted for 4-5 minutes. Within 30 seconds there was more than one metre of water inside. Batteries and electrics were "gone" and the motor stopped soon after the roll.

The two on deck were trapped under the cockpit. Matthews was trapped under the end of the cockpit at the end of his harness tether, became short of breath and was in fear of drowning. He had extreme difficulty unclipping his harness, but eventually did. He was able to pull himself forward and got to the mast (lashed to the deck) and as the boat rolled back, was "flipped into the cockpit", to land adjacent to his harness tether and re-clipped. He found crewmate Skeggs face down in the cockpit and determined later that he was dead.

Below deck, 2 crew were wearing bushwalking "head" lights so they had plenty of light while inverted. The crew found the rafts and had them ready at the companionway.

When a second big wave rolled BPN back up, it was apparent that everything below was "trashed". The EPIRB was still in place but the aerial broken. Anchor chain, floor boards, crew bags and miscellaneous gear was all through the boat.

Skipper Guy below deck slipped in the companionway as he prepared to go on deck and assist. The crew reported that he had a massive heart attack at this time that caused his death.

On deck they were administering CPR to Skeggs, while the crew below were getting a life raft into the cockpit, as they were expecting the boat to sink. The raft was inflated and tethered astern, where it kept flipping over.

The crew deployed three parachute flares, made into an extremely difficult two person job by grease and diesel that had been distributed throughout the yacht's interior. In addition, the storm jib was deployed over the bow as a sea anchor, to be joined later by a spinnaker to improve efficiency. The helm was lashed to keep the bow into the seas.

The crew bailed water from the boat, but when "1/2 full" of water it felt less likely to roll again so they concluded to leave it in this state after several hours of bailing, leaving around ½ metre of water. It was now about 2000 hours on 27/12.

Around 0200 hours, the crew noticed that conditions had improved marginally, although seas were still breaking and raking the boat. The crew believed BPN was in imminent danger of sinking.

In preparing to put the 2nd life raft on deck in order to be fully prepared, it inflated accidentally half way through the companionway creating difficulties. It was eventually brought on deck and tethered on the side. The crew sheltered below deck, leaving Skeggs lashed in the cockpit.

At approx. 0300 hours another big wave struck the boat and carried both rafts away. The crew had 'some sleep" and discussed what actions would have to

be taken if no help came, ie. jury rig etc. They also sensed the weather continuing to improve slightly.

At around 0700 hours a two engine plane flew an estimated ¾ mile ahead of BPN and the crew launched a parachute flare and 2 orange smoke flares. The plane acknowledged the sighting by flying overhead and staying overhead for approx. 15 minutes.

By 0800 hours a helicopter arrived and BPN crew signalled that they had 7 on board that were ok and two not. One of the BPN crew had had SAR training and armed with the knowledge of what to do the helicopter was able to pick up the BPN crew within 30 minutes.

A tracking beacon was lashed into BPN and the yacht abandoned, with Guy and Skeggs on board. BPN was later found and towed into Eden, and the bodies of Guy and Skeggs recovered.

CREW INTERVIEW – CANON MARIS
Sydney 13/2/99

Attendance: I.Kiernan, R.Hammond.

Boat well prepared with an experienced crew having extensive offshore experience. Crew expected a hard race and decision to sail conservatively made. The boat had a system for crisis management, which was adhered to, and the crew equipped with excellent wet weather gear and buoyancy vests (Musto) with integrated Musto safety harness.

2. Hard running on first day, with no problems. As they approached Bass Straight, boat was close reaching with #4 jib and a reefed mizzen in 10 to 15 metre seas with winds westerly @ 60 knots.
   Sunday am – a sea swept the dodger overboard and we were unable to slow the boat down. Following crew discussions, we decided that the conditions were such that, in order not to damage the vessel nor cause possible injury to crew, that we would retire and proceed to a safe port. RH commented that he had never seen current nor sea conditions of such confusion and magnitude in previous 39 Sydney-Hobarts.
4. Whilst maneuvering to set a comfortable course north, some 150 degrees to the weather, the leeward J lock on the #4 jib sheet became unattached, damaging a porthole. We then blew out the clew of the #4 and changed to a Spitfire jib. The boat was comfortable heading north, and as conditions improved, they decided to proceed to Sydney.

Comments by Crew:

1. Pre race documentation good.
2. Pre race briefing – weather report was too flippant – need a more professional approach.
3. Radio Schedules. Weather reports were read too fast, with too much irrelevant information. Radio communication was hampered by chatter of long duration, with important information not passed to the fleet. (Outside assistance?)
4. Storm jib sheets to be sewn on permanently – no J-locks.
5. Waterproof handheld VHF.
6. 406 EPIRB to be mandatory.
7. Personal strobe light for each crewmember.
8. Crew education, first aid, and safety at sea, recovery procedures, and liferaft education.
9. Review of crew experience.
10. Requirement for a long race prior to Sydney-Hobart race.
11. Liferafts to be stowed on deck.
12. Review of liferaft requirements.
13. Basic seamanship-sea anchors and their deployment.
14. Complacency by crews.

G.W.Halls

INDIAN PACIFIC – Interview conducted by Peter Bush on 12th of February 1999 at the Sandringham Yacht Club at 1930 hours

Present: Sid West, Wayne Reynolds, Darryl Barret

NB: This boat interviewed in particular because LPS/SI close to lower limit of 110°.

Crew Experience:
The bulk of the crew had sailed extensively together including ocean racing. A well experienced group & a tried and tested yacht.

Conditions prior to the storm:
The crew ran a set watch system that was "working well", and like the rest of the fleet enjoyed the fast running conditions down the NSW coast.

Conditions during the storm:
Soon after midnight, they removed their kite, and continued two sail reaching. By mid morning they were still carrying a no. 3 and full main with seas still quite "reasonable". Ahead they could see the storm building – lightening across the Southern horizon.

At 0300 they had heard the sked issue the gale warning for the area, but despite some seasickness (radio operator in particular) this did not alter their racing strategy.

At 1200 the skipper attempted to get a weather update, but was unable to do so. He did however hear SWORD OF ORION, about 40 miles ahead, advise of extreme winds at their position. At INDIAN PACIFIC's position, winds were only 35 knots at this time, and the crew were unconcerned.

They decided they should wait for the 1400 sked before making any decision regarding retirement. On hearing the sked, they took the decision to retire and set the boat up for bad weather.

This preparation included bending on a storm mainsail and a no. 4 headsail.

INDIAN PACIFIC retired 45 miles from Eden, and within 30 minutes of the minutes of the decision, the wind increased to 45-50 knots from the SW. Seas were beam-on their course and were described as "pyramid" in shape.

INDIAN PACIFIC sailed into the weather by pointing the bow up into the seas, and steering off at the last minute occasionally to get over the tops. They were occasionally hit (3-4 times) by beam-on seas, and constantly hit by both green and white water.

They also took the precaution of leaving the HF radio on, and placing the EPRIB in the cockpit next to the helmsman.

They had two "very experienced" helmsmen on board who took responsibility for steering the boat in these conditions. The crew, now in a shorter watch, continued to trim the main to power the yacht over the seas, and this was regarded as a key element in their ability to reach Eden without incident. One wave in particular hit them on the beam and pushed them sideways, but they "recovered easily".

The most wind INDIAN PACIFIC recorded was 63 knots true, and seas were estimated to range between 6 and 16 metres.

As they closed the coast and entered the lee of the land, the wind decreased to 20 knots and INDIAN PACIFIC motored the last 10-15 miles to port.

The crew suffered a little seasickness but could still function. They were concerned at the conditions, but recognised that the boat needed power to attack the seas and recover from waves. They recognised that it was "waves pushing them over, not the wind on the sails".

The carried the storm main because their experience suggested that the tri-sail was too small to provide the power necessary to make the boat point, the central part of their heavy weather sailing tactics.

They also had much confidence in the boat as it had been in an extreme storm only a few months before, along with some of their crew. They arrived in Eden with the only damage being a 700mm tear in the no. 4 boltrope and the motor (hydraulic gearbox) sucking some air.

Suggestions/Recommendations:

- More frequent weather forecasts
- More education/training, life raft drills, other safety demos
- Questioned the quality and type of life jackets – but not based on their experience in the race
- Personal EPIRBs – questioned usefulness, if yeas, we should adopt them
- Multiple harness strops to enable moving around
- Questioned mast/hull construction of other boats – but were sailing boat of light construction with low stability index!

<u>Key learnings from interview:</u>

- Hearing SORD OF ORION report extreme conditions instrumental in decision to withdraw
- Kept actively sailing boat into the seas, and maintained speed and control
- Made good preparations prior to storm and took sensible precautions (eg. EPIRB on deck)
- LPS low: but boat recovered well from winds/waves and knockdown
- Seas, not winds were the critical issue to deal with

JUBILATION –Interview conducted by Peter Bush on 13th of February 1999 at the Sandringham Yacht Club at 0700 hours

Present: David James (skipper), Murry Jacobs (4 x SH), Rosie Colahan

Crew experience:
This was among the best prepared crews I have encountered ever. The navigator had been plotting weather patterns for 3 months prior. They created a Crew Newsletter 3 months prior and they practiced man overboard drill – with a man actually in the water until they ascertained the best method of retrieval for the boat. Additionally a nucleus of the crew has sailed together in extreme conditions. NB: Average age of crew was 58 ½!

Conditions prior to the storm:
The crew maintained a very strict routine from the start, including keeping meticulous plotting and radio logs. They had prepared by taking seasickness pills – in some cases a day or two before the event – and a routine of taking pills was maintained throughout the race. The watch system never broke down at any stage at the race.

Towards the end of the hard running JUBILATION could see electrical storms, and had a strategy of heading inshore believing it would offer more options when the front arrived.

Conditions during the strom:
JUBILATION had a 4th reefing point and a no. 4 headsail as a direct result of learnings from being caught in a bad storm during a circumnavigation of Tasmania.

At 0730 on 27/12 JUBILATION heard a storm warning current for Eastern Bass Strait and NSW South coast, and by 1300 had determined to seek shelter and continue racing when the storm abated. JUBILATION took shelter in Bitangabee creek about 3 miles North of green Cape, where they anchored at 2100 for some 7 hours.

The use of the barometer was critical in their decision to seek shelter. "You did not need a weather forecast if you watched the barometer".

The navigator had been plotting the storm track for some time and was confident of his knowledge of its path (the same person has been tracking the weather for the previous 3 months).

JUBILATION departed Bitangabee Creek at 0400 to continue racing. They had much experience in tougher conditions, and their boat was well tried and tested.

On departure they encountered 35-45 knots, carrying the no. 4 and 4 reefs in the main. Between 0800 and 1200, winds continued at 35-45knots with the tops of the waves "blown sideways". Seas were difficult, but the crew were

confident they had the right power to manoeuvre effectively and steer off the backs of waves as necessary.

The strong SW airflow continued to Maria Island and JUBILATION encountered particularly confused seas around Banks Strait. The crew developed a special watch system for the tough conditions, maintaining 3 on deck, and one below in the companion way, ready to come on deck at all times.

JUBILATION reached Hobart without incident, and zero damage.

It is worth restating that this boat and crew were meticulously prepared and drilled. They had experienced extreme conditions previously in this boat and had the boat well prepared for the conditions. They had good weather forecasting knowledge on board and used it to the best advantage - to not only seek shelter but also determine when it was appropriate to continue racing.

Recommendations from JUBILATION:

- Preliminary organisation - for first-timers the Sydney Hobart Yacht Race is a daunting prospect – getting more information like the sailing instructions much sooner would be a real benefit
- Stated that pages were missing from the sailing instructions
- Radio skeds were too long

Key learnings:

- Meticulous planning and preparation was pivotal
- Strict routine on board and adhered to
- Good weather forecasting skills on board, accurate training and use of barometer key in decisions
- Actively sailed the boat into the seas
- Experienced in extreme conditions, influenced attitude and decision making

KINGURRA

Interview conducted by Peter Bush on 14th February 1999 at the Sandringham Yacht Club at 1000 hrs

Present: David Route, Alistair Knox, Peter Meikle (Joubert claims traumatised), Anthony Snyder (steering at time of incident MOB)

Crew experience:
This crew has sailed extensively together and the skipper had competed in 27 previous Sydney Hobart Yacht Races.

Yacht Preparation:
KINGURRA was designed by the owner/skipper and was heavily built and strong yacht with a record in competing in many races that encountered tough weather conditions.

Conditions prior to the storm:
The running conditions were not ideal for KINGURRA versus many other boats in the fleet that would be comparatively quicker in the northerly flow. Nonetheless the crew drove the boat hard, with positive expectations about the Southerly front, where they thought they would get strong headwinds that would help them pull back the "competition".

By 2200 KINGURRA had removed spinnakers and could see lightning across the full Southern horizon. With the storm imminent they checked the boat out for loose items, and had storm equipment and lashings ready in the cockpit for when needed. (They were prepared for setting the storm sails, having deployed it in Sydney harbour with the full crew one hour before the race start).

By 0700 the breeze was WSW at around 25 knots and by the middle of the day the wind had "settled down" at around 35-40 knots. On board KIBURRA, the crew assumed that this was all the wind they would get.

The crew also expected that the change would come through as a "Southerly Buster" – fast and furious, rather than the slow build they experienced.

Conditions during the storm:
At the 1400 sked they heard SWORD OF ORION advise of extreme winds and by 1600 at their change of watch were experiencing winds of 55 Knots plus and only 20 minutes later up to 60 knots. The crew described the boat as "riding beautifully", and felt confident and positive.

By this time they had removed the mainsail and were under staysail only with the boom lashed to the deck between two winches. There was modest seasickness, but no one was incapacitated and all were standing watches. The engine was started to change batteries.

Their heavy weather sailing technique was to keep the boat sailing into the waves and wind, feathering it a little. This was somewhat more uncomfortable

60

but provided good control and "left options open". Occasionally they would "flick off" the top of a wave. Their course for racing had become irrelevant as they were steering the best course for the seaway.

The winds remained at 60+ knots, and only the 1st storm board was in place. Those below were comfortable and dry and even sleeping! The crew were confident and believed their storm staysail was the right size. The seas were so large that the crew claim that in the throughs there was virtually no wind.

They had been sailing effectively in these conditions for some 2 ½ hours with the occasional extra big wave putting some water over the deck. In the daylight these could be seen coming and the call "wave" from the helmsman preceded the boat being hit, giving the crew ample time to hang on.

In his peripheral vision, the helmsman saw a wave about to strike them on the aft quarter, rather than on the bow quarter where the seas had been coming from. He called "wave" and attempted to bear away, but believes he only altered course some 10 degrees.

The KINGURRA is hit by the wave and "tossed like a cork", knocked down on its beam ends to about 120-130 degrees, and then righted itself.

The helmsman (Snyder) was washed off the boat to the extent of his harness strop, on the port side with his strop clipped on the starboard across the backstay, effectively shortening the strop.

A second crewman, John Campbell also clipped to the same point on starboard was over the starboard side off the boat to the full extent of his strop.

Below deck a loud sudden bang ("like hitting a brick wall") is heard and the crew below assumed that they have struck something. The bang turned out to be a mainsheet winch to which the boom was lashed, being ripped out of the deck (1" ply deck, 23 winch).

The watch leader on deck called "two men overboard" immediately the boat righted itself. He observed one man in the water face down, and the other attempting to climb back up, holding onto the pushpit rail. After several attempts he realises he will not get back on board without assistance, and decided to wait for help.

Meanwhile, the watch leader attempts to lift crewman (Campbell) on board, but he remains unconscious and he could not get him over the lifelines. (He noted here that if the lifeline terminals were VB cord and not s/s fittings he would have cut the terminals). The harness strop was wrapped wound the crewman's neck and the watch leader removed this, though he is still unconscious.

Campbell was wearing "smooth thermals" with a new wet weather jacket with integrated harness. In the second attempt to lift him on board (still

unconscious) the jacket and harness slip over his head as his arms raise and he drifted free off the harness/jacket and away from the boat. He was face down, later to be diagnosed with a fractured jaw and cheek bone after hitting and smashing the binnacle compass.

Within the next couple of minutes, the crew recover the helmsman from the water, and he immediately is designated the "spotter" to do nothing other than watch Campbell's position in the water. The crew adopt a strategy to keep KINGURRA as close to Campbell as possible. Despite this, Campbell slowly drifts away from the boat.

They could see John easily at first, and at about 60-70 feet behind the boat, he put head up and started waving. Crew grappled with the one remaining life ring – the other had been washed off during the knockdown, but found the cords holding the various attachments had become tangled and would not release. They were cut, but the device was not thrown as John was too far away and it was thought to be prudent to keep it for an opportunity if they got closer.

Below deck, approximately 2 cubic metres of water had entered through the companionway, covered only by one of two storm boards. The skipper was tossed from his bunk, seriously injured and in shock, and another crewman was thrown to the deck head.

With the "bang" and water to their ankles, those below believed the boat was holed. This was reinforced by a spout of water "like a fire hydrant" gushing at the front of the engine. This turned out to be the flywheel on the engine picking up water but they did not know this at the time. The water flooded the electrics, and ultimately rendered the engine unserviceable. The floorboards were "gone" and there was much debris in the bilge, and the engine covers were dislodged. The crew engaged the engine operated pump, but the hose was blocked so they reverted to bailing and hand pumping. In any event, the engine soon stalled.

The skipper, badly injured, made a call advising the RRV that KINGURRA had a MOB situation but has to be relieved within minutes. It is now 10-15 minutes post the knock down and the EPIRB is deployed.

There was no panic amongst the crew, as they go about the tasks at hand workmanlike fashion. With the engine stopped, the realisation that the hull is not breached enables one or two crew to get appropriate clothing to go on deck and to get the injured skipper into a bunk.

In deploying the EPIRB the retaining line became tangled, and it was dragged back on deck.

CHUTZPAH arrived in the vicinity, having heard the MOB call. (CHUTZPAH was only carrying a storm job with the boom lashed on deck.) They sighted the life ring washed overboard earlier and sailed to it, but could not see Campbell.

At about this time a SAR chopper arrived and made for CHUTZPAH – assuming it to be KINGURRA. KINGURRA assumed the chopper had not seen them and fired a red hand flare which the chopper saw and diverted to KINGURRA immediately.

KINGURRA and the chopper communicated by VHF, and the chopper requested information on what Campbell was wearing to help in the search. The "spotter" still able to see Campbell for only 2-3 seconds each minute was able to direct the chopper to him. The chopper went first to the dislodged horseshoe buoy. The chopper recovered Campbell within 10 minutes and departed.

KINGURRA crew was jubilant but they realised that they did not know if Campbell was dead or alive. They contacted the chopper again and are again jubilant when advised that Campbell was ok.

The crew now face the realisation that they must get KINGURRA to shore, and a discussion ensues on what to do. The GPS is functioning and the boat is sailing satisfactory under bare poles, with the wind blowing directly from Eden.

They maintained a mainly northerly course overnight, under bare poles, but with barely enough speed to manoeuvre. By 1500 the next day they hoisted the main and a no. 4 and made a course for Eden, arriving at 0300 hours, never able to restart the engine.

There was no damage to the boat apart from the winch/deck and wet engine electrics.

Recommendations from KINGURRA:

- Life Rings – how stowed and attachments & how attached versus utility
- Personal Safety items: torch, knife etc.
- Reported to start with storm sails set
- Harnesses in jackets should have crutch straps as easier to pull off with slippery jacket linings (NB: harnesses should be done up securely)
- Education various
- When weather severe – encourage yachts to give details of conditions at their position
- Race officials should give more encouragement to yachts to reconsider racing in poor conditions.

Key learnings from interview:

Waves not wind were the key factor
KINGURRA had experienced crew with high levels of confidence in the boat and each other
KINGURRA had MOB strategy that resulted in being able to immediately advise SAR of MOB position

Were sailing actively when incident occurred wave came from completely different direction

Record of Interview
"Loki"
February 11, 1999
CYCA
Howard Elliott

Present:

Steven Ainsworth
Andrew Foster
Tony Kirby
Adam Barnes

This was the owners first race. Preparation for the race commenced immediately after the hamilton Island race Week regatta. A consistent crew was maintained throughout the season with no changes from Hamilton to Hobart. The crew was very experienced and selected particularly for the Hobart. Most of the crew had at least one Hobart with the navigator having multiple hobarts.

The storm gear was tried in 35kts off Sydney Heads following a SOPS race. Some errors were corrected as a result of this trial. The trysail is hoisted on a separate mast track which allows the sail to be hoisted without removing the mainsail.

A great deal of time and care went into specific preparation for the race. Most of the fittings were checked/overhauled. Specific attention was paid below decks to stowage of gear and securing of movable items.

The navigator had established a preset race plan/strategy based on prior experience and predicted weather. The plan was finalised on the morning of the race following final weather info.

The boat went into formal watches at 18:00 26/12. The watch system was the same for both night and day watches. Crew were cycled with less frequency than the helm. Continuous radio watches were maintained on both VHF 16/67 and HF 4483 for the entirety of the race.

A southerly hit approximately 00:00 – 01:00 on the first night. The boat was double reefed when the storm hit. Between 03:00 – 04:00 the main was torn as the wind increased to 40kts. Changed to trysail and #4. This was the configuration at dawn.

The wind abated 07:00 (27/12) the #4 was changed for #3. At 12:30 in 40-45kt winds, heard the report from Rager (wind +70kts). Note: Rager initially gave an incorrect position – susequently corrected byh Rager but may have been confusing to those who did not listen to the entire transmission. Hit by another front at 13:00 – wind +55kts. There were 3 crew on deck. In anticipation of this front the sail had been reduced to #4. Sail was further reduced to storm jib and trysail. Note difficulties in extreme conditions when hoisting storm jib due to having to go bare headed (cf lashing).

Dropped trysail sometime later. Course was 180° with 20° leeway. Steering 190-210. This was the "safest" and most "comfortable" course. The primary consideration was the safety of the boat and not the course to Hobart. Watch responsibilities were now

two helm and one crew (for the watch of 3). Helm was on hourly shifts. No major seasickness was encountered. Food was not a key issue.

At this point the boat was comfortable and handling the conditions well. The crew were looking forward to Hobart. Morale was high.

17:30 28/12 knockdown by rogue wave. This occurred toward the end of a helm watch. There was a possible fatigue issue here [Ed not my comment]. Conditions were 60kt winds. 10m seas. Poor visibility. Rogue wave (significantly larger than ambient waves) broke prior to reaching boat. Trysail was filled turning the boat beam on to the wave. The boat was then rolled to an angle approaching 100-140° [Ed yep, refer to diagram in my notes boat was inclined past horizontal with mast aiming toward trough]. Mast was NOT in the water at this point.

Boat then SLID down wave face landing on port side. Port window was breached – reason unknown (suggestion was twist and water force). The window was hardened glass. There were no hard fittings,poles etc nearby.

Entire contents of boat moved. These included the floorboards thought previously to be secured. Boat was rolled for 10-15 seconds. It did not go through 360 – 180 only. Deck crew were submerged for this duration. Held breath and "hung on". Two eventually floated out on their harnesses (boat still over).

Used manual bilge pump all night. Water ingress had killed electrics. Could not start engine.

After recovery, boat was gybed to recover course. Sailed bare poled (course 045) for approx 60min while situation was sorted out. Attempted to fix window using cushions etc. Eventually strapped #4 genoa (in bag) over opening.

Used a drogue to stop pitchpole. Forgot to deploy chain on drogue. Wanted to continue racing but felt it unsafe with the open deck window. Could not sail on starboard tack. Made mental decision to retire but did not report it at this time.19:00 hoisted trysail. Bad plan. Went back to bare poles and drogues.

Originally purchased drogue for emergency steering. Now know that two drogues are required to effect this. Took opportunity to "test" emergency steering. Drogue eventually failed due to swage in ingress ring wearing its way through drogue fabric.

Speed at this time was recorded at 7.3vmg. Apparent boat speed was 8-10kts down wave faces and 4kts elsewhere.

10:00 29/12 hoisted trysail followed by storm jib. Had difficulties with lashings for strom jib. They kept flogging out. The sail remained in the foil track. Foil was aluminium. It was noted that a plastic trak would not have held the storm jib in. The aluminium track eventually chafed through the boltrope (at the track joins).

Sailed through the day with this configuration – comfortably but in the wrong direction. Were hoping that the weather would abate to allow them to continue to Hobart [Ed determined bastards].

The engine was eventually restarted the following morning. Power was always available to the radios and instruments. The water had only killed power to the starter which eventually dried out. Did not miss a sked.

Officially retired at 14:00 sked 30/12.

Notes:

1 Harnessing was taken very seriously. One crew (v big) was required to wear two tethers at all times due to his size/weight. The helm was required to wear two tethers. There were "permanently" mounted tethers (2) in the cockpit so that crew clipped in/out when entering/leaving cabin. This eliminated the need for personal tethers and kept the boat "tidy".
2. Mrs Ainsworth called CYCA on 27/12 and was given completely the wrong information about Loki. Was told that Loki had retired to Eden. Some of the NOKs and friends could not get through to the CYCA and eventually used the web site.
3. Noted that the NOK telephone numbers (in two cases) were not reflective of where the NOK could be reached (holidays etc). Next year will have only one primary number and better NOK co-ordination.
4. Media info was WRONG. AFR reported Steve airlifted off – this affected the share price but Steve was unable to contact his broker to take advantage of it.

Next Year (for Loki)
1. No additional preparation. Felt that there is no more that could be done.
2. Some additional/changed securing of items below.
3. Increase length of storm jib strop. Perhaps add a yankee.
4. Better NOK co-ord.
5. Different watch system for bad weather

Next Year (for RC)
1. Make sure that info on weather can be passed between boats.
2. Better radio procedures incl relaying of other yachts weather info. Better warnings etc.
3. Suggest that boats experiencing +50kts are required to report it during skeds.
4. Emphasise the race is dangerous.
5. Additional safety seminars demos etc
6. Mandatory seminar attendance (ie at least 1-2 seminars must be attended as condition of entry).
7. Additional safety skeds and turn safety sked into full sked in bad weather.
8. Radio operators (on yachts) need to be certified. Noted panic and inexperience in some operators.
9. Additional frequencies for handling of situations like Team Jaguar.
10. More info on the status of the racing and the fleet during skeds or after skeds.

Record of Interview

"Margaret Rintoul II"

February 24, 1999
RSYS
Howard Elliott

Present:

Bill Riley
Richard Norman
Colin Betts
Richard Purcell
Sven Runow
Graham Purcell

MR2 is 30 years old, S&S design, timber construction. It was designed and built for races such as the Hobart.

7 of the 11 crew had previously sailed to Hobart on MR2. Most of the Hobart crew did the Lord Howe Is race and the Ord Minnet regatta as lead up races. MR2 withdrew from the Telstra Cup as they perceived that their round the buoy performance was not good.

Prior to the Lord Howe Island Race a detailed survey was done of the equipment on the boat. Halyards were reversed; sails were removed and checked by North; safety equipment was checked; water tanks were drained and checked; general equipment was cleaned/tightened etc.

The mast was not removed. It had been removed and rebuilt in 1994 and is due to be removed and checked 1999. The mast is constructed of a (now) non standard heavy section aluminium extrusion.

No MOB drills were carried out prior to either LHI or Hobart. However, as the crew had a lot of experience with the boat, and each other, it was deemed not necessary. Recovery strategy is hoisting from the leeward side. Reefing and sail change drills were carried out. These drills required preset positions/responsibilities for each of the crew. All crew participated in sail changes.

26/12:
Set kite at sea mark. Carried kite until midnight. Gybed as breeze shifted to Northwest and remained under main/genoa. Noted lightning late afternoon. Did not hear storm warning or Doctel Rager radio transmission.

27/12
12:00 wind drops to 13-16kts
13:00 wind increases to 30kts
14:00 20nm south Gabo. Wind now 52kts. Reaching. 2 reefs and storm jib. Wind build up was quite quick. Some question of instruments not reading correctly – max wind speed was recorded as 52kts although experience suggested it was stronger.

Carried storm gear for 9 hours until the wind dropped to 45kts. Progressively increased sail until full main and #3 by 10:00 28/12.

Always use the 'reef early' principle since it is "easier to go up rather than go down'

Throughout the storm the boat was "comfortable". Averaging 7-8kts. Big seas, most of which had 2m of breaking tops. "Comfortable" in this context means the crew felt secure. The boat did not exhibit any tendency to roll or be knocked down. Max inclination was in the order of 30°. Angle was always 60° apparent. Crew morale was high throughout the race.

Conditions were classed as "survival" with very poor visibility. Despite this the boat performed well and did not come close to any serious trouble. The cockpit cover (spray dodger) proved to be exceptional value in deflecting spray and waves.

Crew were always harnessed to pad eyes (never jack stays). Helm harness point allowed bracing against harness through waves which minimised stress on wheel. Personal equipment varied with some crew using inbuilt harnesses and PFDs, some using Bourke standard harnesses.

Late 28/12 off Eddystone (70nm east) in light winds. By 20:00 breeze freshened to 20-25kts and held into 29/12.

Breeze died to 14-17kts until 29/12 14:00 when MR2 was becalmed. By 19:00 breeze returned from the west. Rounded tas Is 01:00 30/12 and finished 12 hours later.

Comments.

1. Relied on weather info from Young Endeavour
2. Did not hear Doctel radio report
3. Did hear Sword of Orion call of 70-80kts when 21 miles astern
4. RRV did "fantastic" job. Never felt "insecure" as a result of RRV presence.
5. MR2 will probably not go to Hobart next year (cost, effort etc). Crew will probably go on other boats.
6. Engine died on first day due to flooding of the engine compartment (water reverse siphoned in from exhaust) and blew head gasket. Had exceptional battery capacity which lasted the entire race. Emergency Nav lights were used to conserve battery power. (4 x 600AH).
7. Crew qualifications should be mandatory including specific Hobart experience, and, experience in the decision making process; ie not deck weight.
8. Sailing program should be reviewed. Reintroduction of LOPS races. Mandate entry in "like" races.
9. Noted that the safest course was to beat. Running before the storm was dangerous.
10. Passed on comment about Miintinta: "Went with 6 crew who had never done the race before. Went for the cruise – refer to phot caption in official programme and comments from owner."
11. Experienced worse conditions in 1979.
12. Feels additional weather reports should be made by RRV.

13. Felt that leading boats should have provided more information about conditions which might have seen some boats continue racing rather than turn back and get into trouble.
14. NOK had difficulty contacting CYCA. Suggest use of IVR to redirect them to Hobart. MR2's NOK is coordinated through owner's wife.
15. Club should run seamanship (et al) courses.
16. Owners should be more diligent. Note the differences between sailing north and sailing south. Sea conditions etc.
17. Life raft design is not suitable for southern ocean conditions. Built to a price not to ht expected conditions. Refer to a Coronial Report in 1993 NZ Starbank by Terry Tichener (Melbourne) re Liferafts.
18. Personal EPRIBS should be mandatory

CREW INTERVIEW – MIDNIGHT SPECIAL
Sunshine Coast 24/2/99

Attendance: P.Baynes, P.Carter, W.Butler, Griffiths.

1. Boat well prepared. Considered crew experience sufficient for any conditions.
2. Boat documentation good; found Race Briefing fair, weather briefing extremely poor.
3. Boat & crew performed well prior to storm, with boat well positioned with vessels of similar size. Prior to weather change, good run down the coast. When wind and headed changed to #3 headsail plus full main, then storm jib plus two reefs in main. Crew in harnesses and lifejackets. As wind increased to >50 knots, removed main. Yacht was overpowered but handling conditions fairly well when reaching. ***(PB thinks they should have gone to trisail to assist yacht response).***
4. Following weather report at 1500/27th ***(crew were of opinion from weather report that the worst of the storm was to the south of their position)***, decided to turn back for shelter at Gabo Is. After changing course, which took some time to pick the right wave pattern, the yacht suffered several knock-downs. Lost JonBuoy plus two liferings overboard, which were recovered. Two crew on deck with harnesses, remainder below. Yacht suffered several knockdowns resulting in serious injury to crew members.
5. At approx. 2000/27th, a large wave with breaking top (15 metres), rolled the yacht 360° to starboard-quickly, breaking the mast above the gooseneck. Coach house stove in on port side, ***(inverted-deck scantlings?)***, one metre hole in coach house, windows displaced – could not install wash boards. Tiller was broken at the rudder stock and water had ingressed into the cabin - 0.3m deep. HF and VHF radios unserviceable, due water damage.
6. Crew head count, activated the EPIRB (GME) plus personal EPIRB, deployed 3 red parachute flares, position 12 man RFD liferaft on deck, bailed cabin, damage control, plugged holes, released rig by removing rigging screws, plus hacksaw halyards. Left forestay attached to rig and boat, ***(helped to keep bow into the weather)***. Noted that starboard side jackstay was broken. Lashed helm to mainsheet and started motor. Could maintain steerage way heading SW, exposing undamaged side of the yacht to the weather.
7. Thought saw ship at approximately midnight, fired 2 flares with no response. Crew secured and watch system instigated to await daylight. During evening maintained damage control on yacht.
8. At approximately 0430/28th, an aircraft was heard overhead and two parachute flares deployed. Aircraft responded by flashing lights and then departed.
9. At approximately 0500/28th, an aircraft was observed overhead and hand held flares deployed. Shortly after, the SouthCare helo arrived, 3 crew on deck, 6 below.
10. Hand communications with helo crew – may have been misunderstood, as David Leslie jumped into water behind the yacht without a tether. Moved 100+ metres away from yacht before helo rescue carried out.
11. As this rescue was being attempted, a wave rolled the yacht 180°, where it remained for approximately one minute before righting. The two crew in the cockpit could not release their harnesses. Whilst inverted, a head count was carried out in the cabin, water depth was waist deep. One crew-member attempted to escape through the opening in the deckhead, but became fouled in cordage with his life vest and was unable to exit. A further wave righted the yacht, releasing two of the three fouled crew members. The third fouled crew member was trapped outside the lifelines under the boom and crew had to cut his harness free to release him, to retrieve him back on board with serious injuries. ***(note - life vests in enclosed compartments - dangerous).***
12. Four additional crew members were rescued by the SouthCare helo, before it suddenly departed site. As communications between the helo and the yacht did not exist, the crew became extremely fearful as the boat was taking water with every wave, and they had just watched their rescuers depart.
13. Approximately 20 minutes later, the VicPolice helo arrived and recovered the remaining crew.
14. Helo transfer of first crewmember took some time due to conditions and lack of knowledge on procedures by yacht crew. ***(Note: rescue methods by various authorities-one crew face to face, other crew holds survivor from behind. Found face to face easier.)***
15. Procedures by Red Cross and authorities at Mallacoota excellent. All crew hospitalisd for minor injuries.
16. Major problem with communication between CYCA Hobart and crews wives-unable to make contact.

Comments by Crew/Owners:

1. Pre race documentation good.
2. Briefing poor. Weather briefing poor (farce, comical approach to serious information).
3. Yacht log books essential. Navigation plots on paper charts essential.
4. Two tethers on safety harnesses.
5. Review clips on safety harnesses.
6. Review personal flotation equipment – suggested Musto type.
7. Waterproof handheld VHF.
8. Liferafts to include EPIRB (406).
9. GelCel battery for emergency.
10. Review localised Man Overboard system, crew sling and locator system.
11. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
12. AUSAR or helicopter rescue personnel to carry out briefing at Race Brief.
13. Review personal information system to public and crew member families. Hobart/Sydney system did not work. Families and personal friends given misleading and non-factual information when able to contact CYCA and authorities.
14. Liferafts to be stowed on deck, preferably in cockpit well.
15. Two flares, 1 parachute + 1 handheld, failed to ignite.

G.W.Halls

CREW INTERVIEW – MIINTINTA
Sydney 13/2/99

Attendance: B.Emerson, R.Gordon, L.McKenzie.

1. The yacht was well prepared and BE stated that the crew were very experienced. Additional refurbishment of the yacht was carried out prior to the Sydney-Hobart Race, with emphasis on safety equipment. *(GH comment: Crew experience on this yacht is minimal; increase in pumping capacity well exceeding requirements*). Attention was paid to the stowage of equipment and crew training was carried out on Sydney Harbour prior to departure.
   After the start, the yacht proceeded down the coast with no apparent problems nor incidents. On Sunday 27th as weather degenerated, the yacht was sailing under a full main and #2 genoa approximately 40 miles east of Eden. Conditions deteriorated and a sail change to the trisail and storm jib were made. The main was lashed to the boom and the yacht secured for rough conditions. Initially the yacht was under-powered and the crew found that the sail area was too small to maintain forward motion. With winds increasing to 60 knots and seas rising to 8 metres, a decision to proceed to Eden for shelter was made late pm. Sea conditions became confused, with steep backless waves exceeding 10 metres in height. As the yacht was experiencing handling the conditions under sail alone, the motor was started and the yacht proceeded towards Eden. The yacht had not retired and the crew intended to continue racing following abatement of the weather.
   After approximately 4 hours the motor overheated and stopped. BE examined the engine and could find no reason for its demise. (BE stated that the engine had been completely serviced prior to departure from Sydney). Whilst inspecting the engine it was noted that the yacht was taking water at an alarming rate. The newly installed manual bilge pumps failed to keep pace with the ingress of water and BE made a PAN call, which was responded to by a container ship, which stood by to assist. The vessel was released by BE following advise of the arrival of a rescue trawler, (Josephine Jean), from Eden and advise that the crew thought that they had the water ingress under control.
4. The location of the yacht was in some doubt and flares released to ascertain her position. Problems with ignition of flares, were experienced by the yacht crew. The yacht 'Southerly' observed the flares and reported the position to Eden Radio. The trawler 'Josephine Jean' was re-directed to the location, arriving at 0155/28th.(36°56'S 150° 42'E)
   Difficulties were experienced in attaching and maintaining the tow line to the "Josephine Jean". At approximately 0530/28th, the crew of the yacht could no longer prevent the ingress of water, and a decision to abandon the vessel was made. The crew launched the liferaft and transferred to the 'Josephine Jean', under extreme difficulty.
6. The crew was extremely fatigued. The 'Josephine Jean' continued to tow the yacht towards Eden. The yacht foundered and sank at 36°57.84'E 150°42.74'E at 0730/28th. The crew of the yacht returned to Eden on the 'Josephine Jean'.

Comments by Crew:

1. Pre race documentation good.
2. Pre race briefing good.

GWH Comments:

3. Query navigation and position Reports.
4. Procedures for liferaft in personnel transfers. No tethers; lifejackets; safety equipment.
5. Education with flares –Ref Robert Gordon Report.
6. Requirements for buckets-safety item.
7. Query seamanship-GWH discussion with Olley Hreiniffon (trawler skipper).

G.W.Halls

INTERVIEW OF "NEW HORIZONS" M236

Present: Roger Hickman, Mike Kelaher, Christopher Morris, Christopher ?

On a cursory look at the questionnaire, it would appear that New Horizons, being a Cavalier 37, was well founded, well sailed and used extensively prior to the 1998 Sydney to Hobart Race.

The crew of 8 showed extensive years of sailing and racing including a few previous Sydney to Hobarts.

The core group of this vessel has been sailing together for up to 10 years. Generally they are a pleasant, cohesive team and of good physical condition. The odd crewmember comes and goes, but the core remains. They have a strict safety policy and the placement of equipment on the boat does not vary from year to year. The skipper also has a policy that all crew has to have sailed on the vessel at night prior to a Sydney to Hobart.

They had practiced putting up the storm sails.

They had practiced man-overboard procedures.

They had chart plotter as well as conventional charts.

The boat did not carry any extra safety equipment ie no strobes or non-regulated EPIRBs.

At the pre-race briefing, while being conducted satisfactorily, there was a feeling from this crew that it was more focused toward the television than to making yachtsmen aware as to what lay ahead. Mike, the skipper, felt more emphasis should have been on a calm reflection of the race. He felt the briefing was rushed and while the weather was discussed, he believes more emphasis could have been spent on this all-important subject. *This feeling could be generated from the fact that all the crew on this vessel felt the weather bureau under-forecast the ensuing conditions.*

This crew did not feel they were highly competitive and were going to Hobart for the adventure. The skipper did not embrace the TV boat in the middle of the line.

New Horizons were getting the weather from Penta Comstat and Telstra Control, and thus always aware of the oncoming storm. They believe they were totally prepared for storm conditions and expecting 50 – 55 knots. Their next comment was they were not expecting the survival conditions that ensued. They set off on a course to establish them to the east of the rhumb line and as the weather forecast increased the duration of the storm from 12 hours to 15 hours, they elected to come to the west of the rhumb line. At around 0001 hrs on 27 December, the wind swung into the west-southwest and they went straight to a #4 headsail and 1 reef mainsail. By daybreak, the wind was 30 – 35 knots and by 1400 hrs the vessel was in good shape with the stormjib on. The boat was well balanced, they had good forward speed, the mainsail was lashed tightly to the boom, there was no major seasickness, and a

strict watch system of 4 on deck and 4 below was maintained. All crew on deck were harnessed at all times. They were taking plenty of fluid but no food. At the 1400 hr sked, which was a normal radio sked, they were still in good control and commented about the excessive chatter on the HF surrounding Team Jaguar.

At dusk, they put a storm board in, some of the crew had Musto-style buoyancy vests, no barometer, and traditional life vests were not worn.

At 2200 hrs, a huge rainstorm lasting for ½ hour, then a total calm followed with no wind. This lasted for about 10 mins and the on-deck crew was in awe of the stillness. The wind then increased to 60 – 65 knots and the vessel was, at times, overpressed with the stormjib. The watch change took place as routine and the vessel was generally in good order with minimal bilge water and no other obvious problems.

At 2330 hrs, the breeze increased to steadily over 65 knots and in the mid 70's. The waves were huge and rolling in a formed, orderly sense. The vessel attacked the wind and waves at about 60° – 70° apparent. At 0100 hrs, at latitude 38°10', an usually big set of waves rolled through the area and the vessel suffered the first full knockdown. As the crashing wave hit the boat, they believe it slid sideways and then spun head to wind. The spinnaker pole was dislodged and was found over the fence, the mainsail and boom were lashed to a stanchion base, and during the knockdown, the stanchion base was ripped from the boat and the mainboom was crashly freely. The crew immediately started to run the motor and it ran until the next knockdown. The crew was amazed and perplexed, however there was no panic as their strength of character and sailing experience prevented those problems.

The breeze was a full 70 knots plus, they removed the stormjib and contacted Telstra Control with their position, etc.

Following this first knockdown, the crew was reduced to 2 on deck, no drogues were used and the wheel was tied down to try to keep the bow up. At about 0230 hrs, the second hatchboard was put in, and the radio was giving trouble, as it was wet. The crew was tired and weary but still maintained a strict watch system with below-decks being fairly shipshape. During the dawn, with 2 crew in the cockpit, a huge wave was heard, white foam engulfed the boat, and it is believed the second knockdown took the boat to 120° to the vertical. Both crew talked of solid green water totally engulfing them. As the boat started to right itself, the ondeck crew managed to clamber back over the lifelines. The crew below deck commented how quickly the vessel came upright. A cockpit locker, which was not tied down, spewed its contents, being fresh fruit, everywhere. This fruit, incidentally, caused drainage problems with the cockpit drains.

Four crewmembers were injured during this second knockdown, one with a damaged knee, one a damaged shoulder, and one with a damaged elbow. One, however, had severely cut his head on a vein or artery, which was spewing blood everywhere. The person happened to be the skipper and happened to be a pharmacist by trade, so he jammed his finger in the hole. Subsequently he wrapped his head in what the crew amusingly says was a sterile teatowel.

A fire extinguisher came loose, gearbags and loose gear was everywhere, and evidently lasagna was spread from the bow to the stern. Interestingly the comment was made that some items strangely ended up in the bow.

5 minutes after this knockdown, the engine, which was still running, stopped. There was minimal water below, barely over the floorboards, and the crew felt there was a strange calm over them, as they believe they had passed the panic stage. The boom had broken off at the gooseneck and broken in half, the wind instruments had been removed, and all but 1 winch handle had gone over the side.

The navigator posed the question to the skipper that they should turn back. His response was immediately yes. They had no lights, no power, and the crew required first aid and in the head injury case, major first aid.

Approximately 1 hour after turning around, the on-watch who were still harnessed with shortened tethers, heard and saw a massive roller coming through. The helmsman put the helm hard down, swung the boat through some 90° and met the wave about head on. By this stage the vessel was in the white water and as he described, simply slid down the front of the wave. He believed the speed climbed enormously, the boat vibrated as if it was surfing backwards down the face of the wave. The boat was then engulfed with white and green water, rolled heavily and came out the other side. *Amazing. His recollection of this incident was clear, accurate and concise. I was impressed.*

The weather was just as severe when they turned around, as they felt they were bucking some current off Gabo Island. They headed in a direction that they felt safe which was about 000°. By midday, the breeze was moderating and some hours later, swung into the south, the crew put the trisail up and sailed to Eden. It was at this time the crew endeavoured to eat. Their fluid intake had been good throughout the ordeal. All crew members were wet and cold, the 3 injured crew members were in mild shock and the head injury was in and out of consciousness and suffering from hypothermia.

As New Horizons had no power, they could not sked in, but continually tried the mobile phone. As soon as the phone was in range, they contacted 0175 to get the Telstra Control number, and much to their surprise, they were patched through to Telstra Control in Hobart where they gave their position and condition, etc.

Extensive efforts were made to get the engine going, with the odd success, but this never lasted for a couple of minutes. On approach to Eden, the Police launch, as the crew says, generously offered to tow them in, and they accepted.

<u>General comments and recommendations</u>

The owner and skipper felt strongly that the briefing and the race were generally becoming too commercialised and the briefing especially should be a time for reflection of the journey that is to be undertaken.

Yachts should be forced to give positions and weather reports once the conditions get severe enough.

It was generally felt that the phone system to advise family and friends of a vessel's whereabouts or condition could not cope with the amount of calls as they spent hours endeavouring to contact the Club and on the odd occasion, got information such as a set of initials but no explanation as to what those initials meant.

The radio skeds with Telstra Control could be more frequent, especially if the conditions deteriorate.

This crew generally believes that had they heard of other vessels' situations, they may well have turned back earlier, as they felt they sailed blissfully into these abhorrent conditions.

SUMMARY

I was generally very impressed with these solid, capable yachtspersons. They had done a lot of miles together and the boat had done a lot of miles. I consider them as an experienced crew in gale force winds as they indicated they had been in those conditions on previous occasions and their preparation and concern confirmed this. I believe they conducted themselves in a sombre, adult fashion, keeping their heads throughout and thus returning safely to Eden under their own steam.

I have only 2 recommendations – the mainboom was lashed to the deck rather than being elevated, which, in this case, didn't cause any human injury, and secondly, the second hatchboard was not put in until after the first knockdown, and this again doesn't prove much as the vessel never had much water below decks.

It should be noted here that a Cavalier 37 has the hatchway to the right of centre, which may have helped with the knockdowns heading south in a westerly gale.

It is envisaged that this boat and crew will compete in the Southport race (as they don't do Mooloolaba) and will compete in the 2000 Sydney to Hobart, as they only do every 2nd Hobart race.

POLARIS – Interview conducted by Peter Bush on 10th of February 1999 at the CYCA

Present: John Quinn, Mel Godfrey, John Marwood, Charles McLean, Craig Hamilton, Peter Rothwell

Crew Experience:
This was a very experienced crew, on a very well prepared and equipped boat. The kipper, John Quinn was competing in his 17th race and had spent a number of hours in the water after being washed overboard in the 1993 race. Most of the crew competed in at least 5 previous events with two in addition to Quinn, competing in at least 14.

Conditions prior to the storm:
POLARIS settled into the watch system with 1½ hours of the race start. The system was well organised and disciplined and in the hard running conditions, the helmsmen were in competition to achieve the fastest speed. POLARIS stayed East of the winds of the Rhumb line to maximise impact of the current, and with the knowledge that the storm front was approaching decided it would be tactically better to be further West.

Conditions during the storm:
Accordingly, they jibed and found that the wind swung West, then to the South-west by midnight. By 0300, they were down to their 2nd reef and a no. 4 headsail, tight reaching in 50 knots of breeze. The boat was moving at between 7 and 8 knots with 2-3 metre seas.

The crew kept excellent logbooks and constantly monitored and recorded barometer variations. At 1300 hours, they received a weather fax that indicated a 982 low ahead. This compared to their 1100 fax prognosis of 990.

Immediately on receipt of this, the crew determined that they did not wish to continue in conditions that would produce up to 60 knots winds (their expectation from the fax), and set course for Eden. All the crew agreed that this was a prudent decision.

They heard SWORD OF ORION advise the RRV that they were experiencing up to 80 knots wind, but at this stage has already determined to withdraw. By 1900 POLARIS entered Tow Fold Bay, carrying 2 reefs in the main and a no. 5 headsail.

The most wind POLARIS experienced en route to Eden was 47 knots true, in seas of 3-4 metres. Their course to Eden, they believe, increased POLARIS' separation from the storm, and helped them avoid the extreme wind and sea conditions.

As the conditions deteriorated to be worse than POLARIS had expected, the crew felt confident that they had made the right decision. Equally the crew confirmed that they did not have to sail in the kinds of conditions that others encountered.

The decision to retire was made virtually on the basis of the waterfront, and Quinn believes they should be competing for all yachts. He also believes yachts were well appraised that conditions would deteriorate and felt more should have taken the option he and his crew took to retire.

Recommendations:

- POLARIS commented on the RRV operator's "Wasted chatter" and inappropriate use of the race frequency for various communications. It was their view that there os room for a substantial improvement in the standard of professionalism.
- Is Lew Carter overworked?
- POLARIS concerned that advice, information and communication to families was poor and needs to be substantially improved.
- POLARIS questioned the eligibility of some yachts based on their view of design and stability – but with no specific knowledge of yachts affected or design expertise.
- Had "Secomar" integrated harness/inflatable life jacket and strobe light for all on board. These have lanyards with an additional clip halfway down so that no crew member is ever unclipped.
- Should not allow cheap life jackets.
- John Quinn re 1993 experience: does not believe he would have survived in the water with a fully inflated or bully life jacket. At first he tried to ride over the waves but was knocked down and dragged. He then tried diving under, which he was able to do with his Musto vest, which gave him positive buoyancy.

Key learnings:

- Experienced crew & very well prepared boat
- Weather fax – single most important key influence on decisions
- Despite decision to retire, still had to battle up to 50 knots winds, kept "actively sailing" the boat

SOLO GLOBE CHALLENGER

Interview conducted by Peter Bush at Lake Macquarie Yacht Club, 6th Feb 1999

Present: Tony Mobray (skipper), Bob Snape (navigator), David Marshall Glen Picasso, Tony Puriss.

Crew Experience: This was a very experienced crew with 4 of the 5 each having at least 20 years sailing experience, and at least 15 years offshore. The skipper had 14 previous Hobarts, the navigator 23, and each of the others between 1 and 5.

Boat Preparation: SGC was being readied for a single handed circumnavigation and was meticulously prepared.

Conditions Prior to Storm: SGC was being driven hard before the northerly flow. Late Saturday night they jibed as the breeze moved to the NW and by dawn on the 27th were two sail reaching in a mainly westerly air flow that oscillated between 20 and 40 knots. The crew made continuous sail changes as the breeze surged and were in good spirits.

The Storm: By 07.00 the wind had headed and SGC was now working into headwinds gusting at up to 40 knots. Seas were building. By 12.00 the wind and seas had continued to build and while SGC continued to race with the crew in good spirits, the decision was taken to go to bare poles. This was primarily because the storm jib with high cut clew was regarded as too big and the back stay ram had bottomed out not allowing enough tension on the forestay. Winds were now gusting to 60 knots with flying spume and very big seas. By 14.00 gusts of 70 knots were registered, it was "impossible to look to windward" for the flying spume and 0.6 meter of white water was common over the deck. Four crew were on deck and four below as the boat continued on a course of between 160 and170 magnetic at about 3 to 4 knots. SGC was being sailed at the best angle to the sea for comfort and safety, and the tactic was to pull away as big waves hit.

Dismasting: At 16.00 SGC was sailing in company with PIPPIN with gusts regularly over 70 knots. SGC were faced with three consecutive big waves, the third claimed to be as much as 20 meters. The first wave wiped off approximately 50% of SGC's speed and the boat had been steered away from the wave as previously described. The second wave slowed SGC to be virtually dead in the water and the third wave struck the boat beam-on "like a green tube". The wave pushed the boat down the wave sideways, rig first, throwing the helmsman out of the boat over the pushpit to the end of his harness teather. The mast broke at the gooseneck, falling aft into the cockpit, pinning two crew and breaking one crewman's leg. A cockpit locker and skylight were broken allowing the egress of water that disabled the ships radio equipment and GPS. There was no panic on

board and the crew set about removing rigging pins to clear the mast, check radio etc...Within ten minutes two EPIRBS had been deployed, one of which it was determined later probably was not functioning. PIPPIN who saw the incident turned to render assistance but was dispatched by Mobray believing that conditions would not allow them to. SGC's assessment was that they were "in strife but could look after ourselves". Additionally they were concerned for Pippin. Four crew were injured; broken leg, broken arm and two with broken ribs.

SAR Within 1.5 hours the boat had been cleaned up, injured below (except for a crew member with the broken leg who had not and did not advise the others of his condition) and a new routine established. SGC was now being steered 050° to 060° magnetic square to the waves. No one on deck put on a life jacket as it was thought to increase the likelihood of being washed overboard. The lack of a mast made a big difference to the speed of the boat and the decision to start the motor and run ahead in idle was changed to slow the boat. Later the engine would not start due the crew believe to water egress and dirt being disturbed in the fuel system during the knockdown (although throughout the entire episode there was always sufficient battery power).

At around 18.30 hrs an aircraft circled and a different plane again some time later. The crew was aware that both planes had located them but were unaware if they had identified them. Soon after the second aircraft departed an unidentified blue hulled container ship approached within 500 meters, slowed then resumed its course. The crew assumed the ship had come to assist but not to take them off SGC. As the ship turned away SGC fired a parachute flare concerned that the ship may not have seen them.

The crew followed a routine overnight, including eating and drinking as necessary.

Overnight SGC rolled badly on its beam- ends with waves breaking over the boat and into the cockpit causing the crew to be genuinely concerned for their safety. Soon after daylight it was clear that conditions were slowly abating and at 0800 28/12 the crew on deck heard a chopper. A smoke and a parachute flare were not seen by the aircraft but a second flare sequence brought the chopper overhead. Discussions amongst the crew regarding the possibility of rescue had resolved that it would be up to individuals to decide to stay on board or be evacuated. SGC communicated with the chopper through hand signals, and one SGC crewman with his own inflatable life jacket got in the water on instruction to be winched to safety. He advises that SGC has no radio and the chopper lower a hand held VHF onto the boat. A second, then third crewman is winched aboard the chopper, neither wearing a life jacket.

The chopper departs having advised standby on the VHF and turn off one of the EPIRBS. Conditions continue to abate and the crew consider the construction of a jury rig, which is built by 10.00 hrs using two spinnaker poles. The wind is still

estimated to be at 40 knots. The VHF supplied by the chopper "dies" around 11.00hrs. The jury rig works well and SGC is heading on an approximate course to Ulladulla at about 3 knots. Late in the afternoon an Orion aircraft circles several times but they are unable to communicate. The second night on board is in light clear conditions and even a few beers are opened. At dawn a second Orion and drops marker flares and a package near the yacht. There is some indecision on SCG as to whether this package should be retrieved, as the crew are uncertain as to what is expected of them. SGC retrieves the package and use a hand held VHF from it to talk to the Orion and are advised that the HMAS Newcastle is on en route. By the time SGC rendezvous with the Newcastle the crew who have been working on the engine since first light have made repairs and are motoring to Ulladulla at 6 knots. Newcastle advises that it will remove all crew but SGC allow only the two injured to be taken. Later in a rendezvous with a fishing boat sent to tow them to Eden the crew agree and arrive in Eden some 15 hours later.

Key Learnings:

- This was a very experienced crew who had sailed extensively together. They were well practices and well drilled.
- The yacht was exceptionally well prepared, having been readied for a solo round the world trip.
- Storm jib was too big to use in the wind and sea conditions.
- Got into trouble as the result of having no power to "actively sail" the boat into the seas.
- Incident caused by succession of three waves.
- Outstanding seamanship displayed by crew in recovery.

SWORD OF ORION

Interview conducted by Peter Bush on 23rd of March 1999 at the CYCA

Present: Rob Kothe, Darren Senogles, Carl Watson

Crew experience:

Extremely experienced crew, own very well prepared yacht. (Note: Sword had subscribed to Roger Badham's private weather service).

Conditions prior to the storm:

SOO collided with Maxi Nokia at the start, taking out two stauncheons and punching the pushpit through the deck. On passing the sea mark, the crew took time to make substantive repairs, placing pads under the damage.

SOO had a fast run down run the NSW coast, recording up to 4 knots of set, particularly south of Jervis Bay. By 0230 hours, they removed the spinnaker and poled out a #3, now in 40-45 knots of north westerly.

By 0330 the breeze had moved to the west and SOO was reaching with 2 reefs and a #5, and by 0630 the #5 was replaced by the storm job. The crew commented that they were sailing conservatively and the boat and crew were all in good condition and comfortable.

Skipper Kothe was observing intense electrical activity and cloud build-up, and was concerned that the forecast of 40-50 knots was not reflecting what lay ahead.

By 1000 hours SOO had removed the main, lashed it to the boom and lashed the boom to the deck. They were proceeding under storm jib only.

At approximately SOO spoke to RCVP Eden on VHF, and was advised of 92 knots of wind recorded at Wilsons Promontory. The forecast they were given at that time nonetheless remained at 40-50 knots. (They did not hear Rager's call of extreme weather at 1235 hours).

At the 1400 hours sked SOO advised the RRV of extreme winds and conditions, (confirmed by Yendys). SOO was concerned that the BOM forecast relayed by the RRV was not indicative of the weather ahead. SOO also reported in the interview that they were uncertain of the duration and direction the storm would move.

SOO had a heavy weather strategy that was decided and discussed before the race. It was determined before the race and implemented as the rough weather developed. It consisted of reducing crew on deck to two, and keeping all storm boards in situ (amongst other things).
(After the sked SOO spent some time relaying for Ausmaid and Team Jaguar).

Conditions during the storm:
SOO crew discussed retirement for several hours. Key considerations were, what conditions were ahead and how long would they last, and the condition of the crew (some seasickness had occurred).
Around 1630, the decision was taken to retire, and the RRV logged SOO's radio report of this at 1644 hours.

After turning around, the boom was transferred to the opposite side of the boat and lashed down. The intention was to head (generally) for Eden, but the course chosen of 340° magnetic, was the best and safest in the seaway.

The seas were difficult, and great care had to be taken to watch the waves and steer the boat accordingly. This was difficult due to the wind strength creating flying spume.

Helmsman Glyn Charles had been steering prior to turning around, and continued to do so on their new course. After helping jibe the boat (which they did with the engine running "just in case") and tying the boom down on the other side of the boat. Charles was left on deck with one other crew Darren Senogles, as per their pre-determined heavy weather strategy.

SOO was down on course to about 30° magnetic when an extremely big wave hit the boat rolling it through 360°, now some 25 minutes after turning around. The boat stayed inverted for about 5-6 seconds, and righted itself.

Below deck, the crew reported all going black with an horrendous noise, and not being sure exactly what had happened. The skipper was pinned under sail bags at the navigation station with a broken leg, with the rest of the crew (below) ok, but shaken.

On deck, helmsman Charles had been swept away, as the webbing stitching of his safety harness failed.

The mast was broken and wrapped around the boat, the alloy steering wheel partly ripped away, the wheel well was breached, allowing for the ingress of water. The deck was rented from the hull for 4 metres from the transon to the coach house (starboard side). The companionway hatch had been ripped away by halyard tails from the mast stowed hanging into the boat, and cockpit frames along with all the rest of the yacht's ring frames had been dislodged.

Senogles immediately called MOB, and most of the crew were immediately on deck. Charles was upwind, and it was impossible to throw life rings heaving lines against the wind gusting at up to 80 knots. Consideration was given to swimming after Charles with a line (the anchor line being the only one left available) but this would place additional crew at risk. They lost sight of Charles within 5-7 minutes.

SOO was drifting at an estimated 4.5 to 5 knots, with the rig down the side the boom gone and significant structural damage. The engine was unserviceable

(the fuel tank intake had been dislodged) and there was considerable water in the boat that disabled the HF radio.

They cut away the rig with a hacksaw and removed pins (note: the bolt cutters were not effective on the rod rigging) and deployed the anchor and warp as a drogue. This worked well, holding the head to wind and slowing the boat to 2-3 knots. Approximately 1½ hours after the incident, SOO sighted a yacht, still heading south some 1-200 metres from them. They launched flares to attract attention, but the yacht continued (yacht identified as Margaret Rintoul II).

The crew deployed a spare VHF antenna, and brought the EPIRB on deck, lashing it into position. (Later a SAR aircraft advised then to deploy the EPIRB in the water and once in the water the telescope aerial broke, and the line attaching the unit to the boat chaffed and parted. The EPIRB drifted off).

Some 3 hours after being rolled SOO heard a SAR aircraft overhead and contacted them on VHF. Some 30 minutes later they make VHF contact with SAR helicopter, and SOO gave their position and placed their EPIRB in the water, as instructed.

SOO continued to take water and bailing with a bucket and a draw was continuous. The crew were able to light the stove and eat some food, while waiting for the rescue chopper.

At around 0200 a Navy helicopter approached SOO using strobe lights, SOO had deployed to help locate them. SOO advised that they have two injured on board but the chopper confirmed that they would like to begin the rescue with a "fit" person.

SOO was able to talk to the SAR chopper with the yacht's VHF, but reception was poor, and it was difficult to hear because of the chopper overhead.

All crew put on PFD 1's, and the chopper lowered a line with a monkey first to enable SOO crew to pull the winch line down. Senogles went first, and after some difficulty with the process, as his yachts safety harness came unclipped from the choppers line, was winched to safety. It took some 20 further passes to re-connect Senogles to the chopper's line.

A second Navy chopper arrived around 0400 and stayed in contact, usually visual, with SOO. At first light the remaining 6 crew were extracted within half an hour.

SOO noted that the Navy advised that they had not previously trained or effected a rescue in more than 50 knots. And that the sling used was not friendly to injured crews – one with a shoulder injury, one with a broken leg.

Recommendations from SWORD OF ORION:

- Boltcutters not good/effective on rod rigging
- Buckets better than bilge pumps in the type of situation as they remove more volume
- Hand held VHF would have been more useful than ships VHF
- Strobe lights at night were very helpful to the SAR crews in locating SOO
- Jackstays suspect
- Jonbuoy deployed accidentally by wave
- How can you get something upwind in 80 knots of wind?

TEAM JAGUAR

Interview conducted by Peter Bush on 21st of February 1999 at the CYCA

Present: Martin James (skipper), Bruce Morrow, Tony Egington, Jamie Hastie, Steve Burnet (navigator)

Crew experience:

A well experienced crew with considerable ocean and ocean racing miles behind them. Several had experienced the 1993 race.

Conditions prior to the storm:

TEAM JAGUAR carried a 05. or 1.5 oz spinnaker during the course of the day and was making excellent time down the NSW coast. THE NE to NW flow reached up to 30 knots true later in the afternoon, and boat speed averaged around 13-14 knots, over an average of 3knots of current.

At the start of the race TEAM JAGUAR had made the decision that they wanted to be as far inshore or at least at the rhumb line when the breeze changed from North to South, believing that being inshore would be the best place to enter Bass Strait.

Conditions during the storm:

TEAM JAGUAR could see lightning out to sea and over the land, but not directly ahead, prior to the change. The breeze shifted through the North-West to the South-West over one or two hours, and given TEAM JAGUAR's inshore position, the boat at no stage was hard on the wind.

TEAM JAGUAR made a decision well before the storm that they would go straight to a no. 5 headsail and two reefs in the main as soon as front was in evidence. (Note: it was only a 2 reef point main, so equivalent of 3 reefs).

The wind continued to increase overnight and by daylight was at 40-45 knots from 250 magnetic. Seas were at 3 metres and pretty much on the beam. The boat under 2 reefs and no. 5 was sitting up and doing around 15 knots.

The crew experienced some seasickness, with the skipper unable to stand at least one watch. Nonetheless, meals continued to be prepared, although some people did not eat, and the whole watch system continued as planned. All equipment was functioning efficiently and effectively.

Dismasting:

At approx. 10.00 hours, TEAM JAGUAR was dismasted, possibly due to spreader failure. The rig fell aft, breaking in two places, crushing the pushpit and breaking the HF, VHF and SatCom C aerials. All were now unfunctioning. Additionally the two horseshoe buoys and Dan buoy were lost.

TEAM JAGUAR had a satellite phone supplied by Telstra and attempted to use it to communicate their situation. It was discovered that the phone had not been set up by the supplier to make outgoing calls.

There were 10 people on deck at the time of the dismasting who set about removing the rigging pins and cutting the rod rigging with a hacksaw. The starboard side was cut first, and the broken mast with sails attached now hung over the port side and was being dragged under the boat as it was pushed by beam on seas,. It was considered too dangerous to attempt to retrieve the boom or vang and the rod was cut and the remains dropped over the side.

The rig was cleaned up within about 45 minutes and although no wind instruments were available, the crew believed that wind and sea conditions definitely increased during the 2 hours immediately after the dismasting.

About 10 minutes after completing the clean-up, used to insure that no warps were over the side, the crew started the motor and headed for Eden. The course to Eden was about 340° magnetic.

Following the loss of the mast, the motion of the boat changed, hitting the aft quarter, causing the onset of seasickness that disabilitated more than 50% of the crew. A watch system was worked out with the 6 remaining fit crew.

An attempt was made to connect an emergency HF aerial, to advise the RRV of their dismasting, and course and ETA at Eden.

At 1400 with the seas coming from 140° a wave, significantly bigger than the prevailing seas "jumped up" from 180°. TEAM JAGUAR was plunged vertically down the face of the wave, and buried the bow, submerging as far as the companionway – 2/3 the length of the vessel. TEAM JAGUAR then shot up vertically, due to the buoyancy, to be hit by the top of the breaking wave, pushing the boat on its port side, and into the back of the next wave.

When TEAM JAGUAR regained an even keel, two crew were overboard – at the end of their harness teathers, and an estimated 2 tonnes of water had entered the boat through the gap where the top washboard slotted to the companionway. (This had not been in place).

Of the two men overboard one crew member was able was able to scramble back on deck unassisted, the other, had to be helped from the water.

Water damaged the HF and VHF radios and disabled the GPS. Some 30 minutes later, TEAM JAGUAR could however hear one frequency only (4483 –the race frequency) and it was not for another 30 or 50 minutes that they were able to transmit on the same frequency. For the remainder of their situation, TEAM JAGUAR could only transmit and receive on that one frequency.

The incident had caused a sheet in a cockpit bag to be washed overboard and wrap around the propeller. This stalled the engine, and also jammed and seized in a wet shaft bearing. The motor was now unserviceable.

Given the proximity of the radio sked, the skipper took the decision to deploy the EPIRB. His main concern, given their inability to communicate was to alert the RRV as to their exact position, not because they believed they were in any immediate danger.

TEAM JAGUAR heard at the 1400 sked that an EPIRB had been deployed, and for all yachts to check if theirs had been accidentally switched on. At around this time, TEAM JAGUAR were able to transmit, albeit with a weak signal, and were able to advise SWORD OF ORION that the EPIRB was theirs. Later, TEAM JAGUAR were able to talk directly to the RRV (as the radio dried out) and jointly agreed to turn off the EPIRB.

At around 1700, TEAM JAGUAR were advised that a commercial tow could be organised and upon agreeing, MOIRA ELIZABETH a fishing boat already at sea was re-directed. MOIRA ELIZABETH gave an ETA of 6 hours, but advised within 4 ½ hours that they were in the vicinity of TEAM JAGUAR.

Over the course of the evening and early hours of the morning a number of attempts were made to rendezvous. However, TEAM JAGUAR was drifting at up to 6-7 knots, and at their hand held GPS, was providing inaccurate positions due to the adverse sea conditions. At around 1900-2000 hours, the ABC chopper was overhead and appraise TEAM JAGUAR of their position – at least 3 miles different to that showing on their own GPS. At other times, it was estimated to be up to 15 miles out.

TEAM JAGUAR was asked by the RRV to deploy a white parachute flare – believed to be a mistake by the RRV operator (ie. he meant red. CAT 1 does not require white parachute flares). It is worth noting that the first two attempts to launch a red parachute flare failed because the operator pushed the trigger the wrong way.

This flare, and subsequent red parachute and white hand-held flares were not seen by MOIRA ELIZABETH. TEAM JAGUAR crew confirmed that visibility was at best 50 metres, and that flares were unlikely to have been seen. The times of flares were reported to the RRV by TEAM JAGUAR.

The knowledge that the tow was inbound had a positive impact on crew morale, who continued a watch system with 2 groups of 3. Conditions on deck were made difficult with wind chill making it uncomfortable to spend more than one hour on deck at a time.

Given the failed attempts to get MOIRA ELIZABETH to TEAM JAGUAR, the RRV offered to release MOIRA ELIZABETH from the task. MOIRA ELIZABETH replied "we are out here now and the wind is only 65 knots, we might as well stay". This was heard buy the situation room at the CYCA in Sydney and on board NEVER A DULL MOMENT, a yacht monitoring the race, but not competing.

Around 0230 or 0245 MOIRA ELIZABETH turned on all her lights believing they were now in the vicinity of TEAM JAGUAR. TEAM JAGUAR spotted

these lights and gave MOIRA ELIZABETH a bearing and distance for a rendezvous.

MOIRA ELIZABETH approached close from downwind, creating a position of considerable peril because of the close proximity. TEAM JAGUAR crew commented that this particular incident was " more scary" than anything else that happened.

In preparation for the tow, TEAM JAGUAR had prepared tow lines using spinnaker braces, and were ready when MOIRA ELIZABETH arrived. TEAM JAGUAR indicated to MOIRA ELIZABETH to "float" a line downwind. This was attempted, but regarded as too dangerous for the TEAM JAGUAR crew to retrieve. TEAM JAGUAR advised MOIRA ELIZABETH to postpone any attempt until daylight – approx. 1-1 ½ hours.

On the first attempt, MOIRA ELIZABETH floated a large buoy with a line to TEAM JAGUAR and by around 0530 the tow was facilitated and was under way for Eden at 6 knots.

The wind and seas abated rapidly – within 2 hours – and during the course of the 7-hour tow, MOIRA ELIZABETH changed the tow position to alongside. TEAM JAGUAR are now of the view that if a tow could not have been facilitated that they were in a position to set a jury rig and made their own way to port once the seas abated somewhat. On being taken in a tow the crew cooked a meal and all the crew ate. All were in good spirits.

Suggestions from TEAM JAGUAR:

- Robustness of equipment: fitting and teather on EPIRB too small, telescope aerials broke, personal EPIRBs must be held aloft to work
- 406 EPIRB a must
- Utility of hand held GPS in rough seas needs to be appraised
- Jackstays – need to be stronger- spectra or vectran – and must not stretch
- Personal Safety Equipment – up to the individual, could include personal flares (not legal for sale in all states), personal strobes, personal EPIRBs, inflatable life jackets
- Trailer flares ie. flares that leave a trail from point of origin
- Need for more training – life rafts, weather etc.
- More weather information more frequently

Key learnings from interview:

- Seas, particularly large waves, were responsible for TEAM JAGUAR, incident.
- TEAM JAGUAR were able to communicate with their HF with an emergency antenna.
- Lack of knowledge/experience with flare deployment caused two failed launchings.
- How useful/reliable are hand held GPS's in extreme sea conditions.

CREW INTERVIEW – VC OFFSHORE STAND ASIDE
Adelaide 4/3/99

Attendance: J.Hallion, L.Hallion, B.Thompson

1. Boat prepared in Adelaide with delivery to Sydney by half the crew. Experienced heavy weather attempting delivery of boat to Sydney, crew seasickness, boat eventually trucked to Sydney. This left no time to do Telsta Cup and lead-up races for final crew preparation. JH stated crew experienced reasonable. D.Woods (Safety Inspector) had advised me earlier that the boat was the best prepared boat he had seen for a long race vis. diagrams of layout of safety equipment, briefing notes, radio notes plasticised and attached to bulkheads. New safety equipment including RFD liferaft.
2. Boat documentation good; found Race Briefing generally good, weather briefing 'a bit wishy washy'.
3. Boat & crew performed well prior to storm, with boat well positioned with vessels of similar size. Prior to weather change, good run down the coast. When wind increased to 35 knots, changed to heavy 80% size spinnaker, 2 reefs in main, boat running @ 17 to 19 knots with no round-ups or problems. Crew in safety gear (harnesses, wet weather gear).
4. Sunday am – Wind changed to SW, headed and noticed bigger boats inshore. Observed change in sea state, changed to storm jib plus 3rd reef in main. Wind then went light so changed to #4 and back to 2 reefs in main (dawn). JH stated a number of crew were seasick and the watch system had broken down. (8 crew on deck). The boat was underpowered in light conditions-crew discussion re alternatives.
5. Around midday, wind shifted to the west with rapid increase in velocity and wave height. Removed all sails, ran under bare poles east. Yacht difficult to maneuver @ 5 knots. Lashed main to boom – did not lash boom to deck. Hoisted storm jib, which blew out of track (ties?). Crew unable to recover so left sail as was (no inner forestay). Boat now in control heading 110 to 140 and comfortable. 30% of crew off watch.

   At approximately 1415, a large wave with top 7 metres completely vertical, broke over the yacht. Yacht rolled 360 degrees, breaking mast at deck level, breaking the boom and imploding the deck. Windows shattered, storm boards missing. Deck damage could have been caused by broken mast and boom.

   All 8 crew on deck were washed overboard during the roll, seven tethered to yacht, one not tethered 10m from the yacht (***John Culley-unable to find reason***). All overboard crew required the assistance of those who were below during the rollover, to get back on board the yacht-took 15 minutes. Crew then cut rigging and mast away using boltcutters. (***Yacht had an exceptionally large set of bolt cutters)***. Majority of crew suffered injuries during the rollover.
8. Yacht engine and HF radio u/s. Launched both liferafts. No problems in launching liferafts from below as coachhouse destroyed and yacht 40% filled with water. One liferaft failed to inflate, further tugs on the tether resulted in the tether breaking (***probably at the weak link)*** and the lift raft was lost. Second liferaft deployed and tethered astern of yacht. Activated yacht EPIRB plus two personal EPIRBS. The crew were anxious and fearful.
9. Crew erected emergency radio antenna, HF u/s. Deployed red parachute flare and two orange smoke flares. Hand held VHF connected to emergency antenna and MayDay call received by ABC helo, which responded and was overhead within 15 minutes. Rescue helo arrived 20 minutes later, lifting 8 crew from the yacht via the liferaft. Second rescue helo lifted remaining 4 crew in a similar manner.
10. Helo transfer of first crewmember took some time due to conditions and lack of knowledge on procedures by yacht crew. (***Note: rescue methods by various authorities-one crew face to face, other crew holds survivor from behind. Found face to face easier. Snorkel, facemask and flippers used by one rescue crew, considered an advantage).***
11. Procedures by Red Cross and authorities at Mallacoota excellent. All crew hospitalisd for minor injuries.
12. Major problem with communication between CYCA Hobart and Owners wife. Whilst holding telecon with officials in Hobart, where she was advised that yacht was not in trouble but 1400 sked in progress, coverage of rescue on TV.

Comments by Crew/Owners:

1. Pre race documentation good. Because of yacht/crews sailing programme and being an interstate yacht mail system unreliable. Should get documents on Internet.
2. Two tethers on safety harnesses.
3. Review clips on safety harnesses.
4. Review personal flotation equipment – suggested Musto type.
5. Waterproof handheld VHF.
6. Liferafts to include EPIRB (406).
7. GelCel battery for emergency.
8. Review localised Man Overboard system, crew sling and locator system.
9. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
10. AUSAR or helicopter rescue personnel to carry out briefing at Race Brief.
11. Review personal information system to public and crew member families. Hobart/Sydney system did not work. Families and personal friends given misleading and non-factual information when able to contact CYCA and authorities.
12. Weather updates at 6 hourly intervals.
13. Had they been aware that 80 plus knots of wind in Bass St., they would not have proceeded south.
14. Liferafts to be stowed on deck, preferably in cockpit well.

Comments by GWH:

15. This interview was a little tense. GH had feeling that there existed a problem between owners and crew (who were not present). Owners story too structured in certain areas, fabricated.
16. GH considered crew experience minimal.
17. Watch system broke down as conditions deteriorated, owners had insufficient confidence in crew ability. Tended to do too much themselves, with no real crew procedures in place.

G.W.Halls

Record of Interview
"*Veto*"
February 12, 1999
Artarmon (Home of Mike Crisp)
Howard Elliott

Present

Mike Crisp
Max Crisp
Graeme Brown
Kevin Reid

Experienced cruising crew. Crew had done 2 - 3 Hobarts together on Veto. Veto averages about 4000 cruising miles per year and is set up for long distance cruising and passage making. Achieving Cat 1 was easy. The boat was "over" equipped.

The preparation for this race was not as complete as in previous years. The crew had all sailed together extensively. A few o'niters were done, mainly to check watches and equipment. No MOB drill was done – although was done in prior years with same crew.

One crew was ex navy and had done a number of SAR courses including liferaft survival courses. Another crew had completed helicopter SAR training in North Sea. The crew had three experienced pilots on board.

Pre race planning included race and weather strategy. Weather info was collected since early December. Finalised plan after weather briefing.

Had an uneventful first night. Heard storm warning from (55kts Sth Merimbula) VIS at 20:00 26/12. Understood 55kts to mean average wind speed. Knew that gusting to +/- 10-15% was likely. Thought that the storm would miss Veto based on projected track and Veto's position.

Sailing with full main and genoa until hearing other boats in trouble between 12:00 and 14:00. Shortened sail in anticipation to 2 reefs and #5. Wind was 35kts by this time but noted colour on horizon. Storm hit 14:00 27/12. Wind went to +45kts. Shortened to trysail.

Removed doraid vents, tidied up cabin. Prepared for rough ride. Seas rough but av 3m no breaking tops. 6-7kts boat speed. No dinner that night. 6 of 8 crew were sick. Seasickness lasted until midday the following day.

Engine died 14:20 due to fuel blockage.

Tried to heave to 20:00 28/12. Did not try to make for Eden chose to stay at sea. Felt safer there than on lee shore. Winds now +50kts. Concerned enough to "stop and ride it out" rather than to continue racing. Waves now breaking tops. Windage on roller reefed headsail was making life uncomfortable.

Conditions uncomfortable through to midnight. Just prior to 03:00 29/12 seas started to increase quickly. 03:00 was knocked down by larger than average wave. Boat rolled to 90°. Only two were on deck – the watch system having been reshuffled due to seasickness.

During roll one crew was ob/underwater for 10-15 secs (harnessed on).

[Ed: Note the boat was not being sailed at this point being hove to instead. There was uncertainty about exactly what happened. It is surmised that they "fell off" an exceptionally steep wave.]

Water ingress through companionway. This was open to allow air to seasick crew below decks. This was later realised to be a mistake. Water ingress straight onto radios. Radios now dead.

Electric bilge pump removed water quickly. After knockdown, boat was secured and damaged assessed. Main was torn. Attempted to go head to wind with makeshift drogue (CQR anchor). Though about trailing a sail as additional drag.

After knockdown used 2 tethers for each harness. There was no panic. Crew morale was high. Missed first sked at this point.

Seas too large to run with so remained head to wind until dawn 30/12. Hoisted trysail.

3 crew on deck – pretty knackered due to seasickness and previous uncomfortable night. Radios and nav lights damaged from water ingress including HH VHF thought to be in a waterproof bag (subsequently found to have a hole in it).

Fridges opened during knockdown dumping food. Floor boards had moved despite being screwed in place. Noted that location of radios (immediately adjacent to companionway) was not the right spot.

Commenced course to Ulladulla having made decision to retire. Engine eventually started.

Just prior to 14:00 a C130 (#60) circled (1 interwind pass, 2 downwind pass) wagged wings, crew (in plane) waved to crew on boat. Assumed plane had recorded sail number/boat name and reported position. Felt relieved that NOK would know they were all safe. Sailed on for Ulladulla. Missed 14:00 sked.

Sailed all day. Missed all further skeds. Chose not to set off flare since they thought they had been identified by the C130 and thought that setting off the flare might give someone the impression that they might need assistance.

Phoned the CYCA as soon as within (AMPS) mobile range.

Notes:

Thought RRV resources were inadequate. Expected to hear "teams" handling SAR situation and Lew "handing off" to second team on second frequency.

2. Need additional published 4mHz channels – the primary frequency was overloaded.
3. Drogues should be mandatory.
4. RC needs to highlight the risks of the event to limit inexperienced crews.
5. More stringent crew qualifications and more than 3 experienced crew for larger boats (ie 50% of crew at least).
6. No minors
7. Communications with NOK were good from RC.
8. Need BOM to distribute additional weather information. They are capable of distributing micro forecasts – they should for this race.
9. Next year will have a preset plan for extreme weather sailing. Seasick crew are only capable of motor functions not rational thought.
10. Inflatable PFDs are a must
11. Will attend safety days, liferaft demos etc.
12. Suggest more frequent weather info during bad weather.
13. Team Jaguar situation was appalling.
14. Radios should be checked for VSWR as well as PWR.
15. Will be putting crutch straps in harnesses as they came off in one instance.

INTERVIEW WITH "WAITANGI II" CREW 18.2.99

DRAFT

Interviewer: Richard Hammond

Attendees David Wearn
Marcus Wait
Robert Dickson
Chris Bolton (the most experienced)

They raced regularly before the Hobart and considered this to be sufficient preparation for the race. All on board had sailed together over an extensive period, including having sailed in a previous Hobart race. They claim to have all known where the storm sails sheeted but had not put them up prior to the race. Man overboard drill was only half done as they did not put a man overboard. They also considered that because of the size of the boat (33ft) every man could do every job.

I would conclude that the crew was relatively experienced and they have a routine for most of the necessary safety actions needed to be taken in foul weather. Chris Bolton was particularly clear on what to do and how to do it and he had sailed in the 1961 Fastnet.

"Waitangi" was designed by John King and launched in 1989, and is a conventional design. It has a deep cockpit with combing all round and the stern of the cockpit is filled in - an ideal boat for this year's race. In fact the statement from their survey regarding protection for crew needs to be highlighted.

Chris Bolton had been to Life Raft demonstration at Qantas. There was a grab bag, one personal EPIRB, each crew had a PFD torch and knife.

Before the Storm

Ran before a freshening NE breeze and later changed to a smaller spinnaker then to a No.3 headsail and then changed down about 2359 in a timely manner. At 0200 the wind was blowing 34 knots from S.

During the Storm

The wind freshened and varied from 180° to 270° with 3 reefs and No. 3, 40 knots of breeze gusting 60 to 65 knots at 1400 on 28 December, direction 260°. Main down and storm jib up at 2000/27th, steering 180°. Bad seas and big waves lasted for 24 hours. During the storm "Waitangi" was knocked mast in water once by a rogue wave. They were also knocked down another 4 times but not as badly as the mast in the water.

They were not fully battened down and all storm boards were not in place. One PFD went off. The boat righted almost immediately after the big knockdown. There was one crew member with chronic sea sickness.

Big waves for 24 hours, 29 hours and still big ones. 70-75 maximum wind strength. Their storm sails were the right size and the crew morale was high. They talked about retiring and the forecast was such that it made the decision for them. it was too hard to get to Eden and the storm would be gone in a day and they were handling the conditions with safety. However, they did work it out.

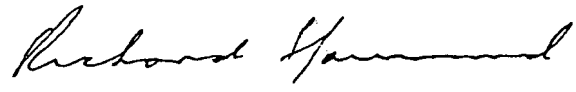
General Observations

- Critical of CYC communications to relatives.
- Suggest a specific number for families to ring.
- Too much information given out to media on personal matters.
- Critical of clips on harnesses.
- Crew to have personal EPIRB.
- Harness and life jacket combined.
- PFD to be worn all the time.
- Mandatory crutch straps.
- Frequent checking of standing rigging.
- Should have a hand held VHF.
- Not happy with light boats and crew on the rail.
- Water drowned both radios and could only hear on HF but not transmit. Side curtains would help this situation or radios positioned other than at the companionway.

Attached is a paper written by Chris Bolton, the most experienced crew on "Waitangi II" which contains some interesting messages.

Conclusion

I consider this boat to be a safe, stable boat that is not designed to have crew on the rail. The crew were very keen and used races leading up to the Hobart. They did not seem to excell in pre-race safety practice.



WILD ONE – Interview conducted by Peter Bush on 12th of February 1999 at the Sandringham Yacht Club at 1800hrs

Present: Graham Smith, Alan Shaton, Peter Cosman, Graham Leggo, Graham Walker

Crew experience:
Although this crew was new to the boat – having been recently acquired, the have sailed together a number of years and competed in many Bass Strait races, including Melbourne to Hobart.

Conditions prior to the storm:
The crew described the period before the storm as "the best 12 hours sailing ever" – surfing at time to over 25 knots.

The crew maintained a detailed paper log and had developed a race strategy, particularly how they would cope with the storm when it arrived. They had a good routine and no seasickness.

Conditions during the storm:
When it was apparent to them that the storm was approaching as the breeze swinging through to the NW, they jibed the boat to get further inshore out of the current in the hope that the seas would be more reasonable. They estimated the current at 3.0 knots.

Around 0200 they could see electrical storms across the Southern horizon. WILD ONE shortened sail early, going straight to the 3rd reef and a no. 4 headsail. They removed the main altogether at a later stage.

As the wind increased and moved through the West to the South West, the seas became uncomfortable and confused and by 0500 winds were occasionally between 25 and 35 knots true. But WILD ONE's log reports that the breeze was back to as low as 20 knots true from the SW soon after sunrise.

As the weather continued to deteriorate, during the course of the day, WILD ONE lost its wind instruments and relied now on estimates. WILD ONE heard RAGER's call that it was experiencing winds of 60-70 knots and gusts up to 80 knots, and called the RRV to ask for confirmation of RAGER's position. THE RRV confirmed the RAGER was only 11 miles ahead of WILD ONE, not far from Green Cape.

All the crew agreed that it would be prudent to seek shelter before the winds were upon them, and headed for Two Fold Bay under no. 4 headsail, to seek shelter.

They advised the RRV of their intentions and in particular that they would be continuing to race, once the storm front passed. They anchored for 5 1/2 hours off a bluff near Boyd Town in Twofold Bay, and were in time joined by other yachts.

They made anchorage around 1900 and set about drying their boat and gear out, including stitching a mainsail batter pocket that had been damaged earlier. They also gave the engine a full checking over.

While at shelter, the crew practiced setting the storm tri-sail, so they would be ready when continuing the race.

They maintained an anchor watch and a radio watch on 4483, and heard the multiple incidents unfolding.

They departed Twofold Bay with a full main and no. 3 headsail, but moved quickly to 3 reefs and a no. 5, as they got out of the lee of the land and encountered 50 knots winds and big seas. The wind was still in the SW. Conditions were "far from comfortable", but the crew was confident that the worst was over and the forecast was for SW winds at 25 knots.

On board, morale was high, as the crew was rested and well fed- like "starting a new race". The wind and conditions abated within 12 hours, with WILD ONE becalmed by Maria Island.

On re-entering the race, the crew, while confident, found conditions to be worse that they expected but were very confident that the boat would handle what they found at the time. They were not confident however, that it could have handled 80 knots, and this was a key apart of their decision to seek shelter.

This experienced crew demonstrated a good knowledge of their own and their boat's ability to withstand the conditions, and saw seeking temporary shelter as a very reasonable option. At no time did they consider withdrawing from the race. Their objective of many months had been to compete and finish the race and they were determined to fulfil that objective.

Recommendations/Comments:

- Administration and applications to racing and safety were regarded as "second to none".
- More frequent weather reports, plus opportunity for interstate boats to use equipment (fax, net etc.) to track own weather.
- Questioned if they is enough time allowed for interstate boats to be prepared for a race like the Sydney Hobart – once arriving in Sydney
- Make life raft EPIRBs compulsory
- Suggestion of GRAB Bags
- More training – flares, life rafts, weather etc.
- Are personal EPIRBs any use? Doubted it but may be need to investigate
- Shorter periods between radio skeds
- Weather more often

Key learnings from interview:

- Experienced crew who had sailed extensively together on various other boats. Knew own limitations but were somewhat unfamiliar with the capabilities of this "new" boat
- Heard RAGER's report wind gusts to 70 knots was the key influence in their decision to retire
- Seaway created more problems/difficulties for WILD ONE than the winds
- "Seeking shelter" was an acceptable and reasonable option to them, they felt no compulsion to press on in extreme conditions.

WINSTON CHURCHILL
Interview conducted by Peter Bush on 15th of April 1999

Present: John Stanley

Yacht Preparation:
WC had been though an extensive refit, and was extremely well prepared for the race.

Crew Experience:
There were two crew who had not previously sailed in a SHYR. The remainder were very experienced offshore sailors with many previous SHYR and similar events internationally.

Conditions prior to the storm:
WC enjoyed a fast spinnaker run down the coast. As the breeze freshened WC dropped the spinnaker, and as conditions were fresh, the crew "grannied" the boat rather than jibing as the wind went to the north west.

As the breeze shifted to the west overnight WC carried a full mainsail and no.3 headsail. By daylight the wind was consistently around 35 knots, and by mid morning, with the wind and seas continuing to rise, the main was reefed to the second reef, with a storm staysail.

The crew were in good spirits and condition with only one crewmember experiencing some sea sickness.

Conditions during the storm:
Around lunch time watches were shortened to only two on deck at a time, and when the second reefing line on the main broke, the crew took the main down and continued under storm staysail alone.

By around 1400 hours Gould and Stanley observed that sea conditions were deteriorating and were independently concerned about the boat and safety in the approaching darkness. They could see no advantage in turning around as it was a beam sea in either direction.

Winning and Dean were on deck at around 1700 hours, when a "rogue wave" overcame the yacht. WC was literally picked up and thrown sideways down the face of the wave, knocking the boat down beyond 90°.

The aft third of the WC took the brunt of the impact, and the two crew on deck harnessed to the split backstay had their harnesses twisted and tangled. (Stanley first to assist assumed they were both washed in opposite directions around the backstay).

To leeward, 2 metres of the bulwark, was sheared off the deck midships, the dodger had been carried away and 3 windows on the aft cabin stoved in, allowing the ingress of a considerable volume of water.

The water pinned Stanley who was in the aft cabin for a minute or so, until he was able to come up on deck and help untangle the two harnessed to the backstay who had called for assistance.

The boat was on a starboard tack, with the batteries on the port side. This meant that when the attempt was made to start the engine, only a few minutes after the incident, the batteries were underwater, rendering starting impossible. (This limited the opportunity to pump water out with an engine-operated pump).

The crew observed the water level rising rapidly, and within approx. 4 minutes of the incident, it was at least 2 feet above the floorboards.

Gould called to Winning to put in a May Day call, which he did on VHF, as the HF was unserviceable due to water damage.

The crew realised that the boat was badly damaged, and observed that the water level inside continued to rise. They assumed that WC may have sprung a plank, and that it would not be possible to stop the ingress of water.

It became apparent that WC would sink, and Stanley passed life jackets to the crew on deck who were preparing the life rafts for launch, and who also deployed a number of flares.

Although they had dropped the storm staysail after the knockdown, WC was still doing about 5 knots, even ½ full of water. They knew they had to slow the boat down before launching the life rafts, and decided to wait for the boat to be about to sink, as the best means of achieving this and getting into the two rafts safely.

Both rafts were floated and tied together, and the crew discussed what had to be done. The crew were calm, and businesslike with no panic.

About 25 minutes after being struck by the wave, WC sunk, and the crew took to the two life rafts, which were initially tethered together. The tether broke almost immediately and within 10 minutes the rafts lost contact with one another.

Stanley, Dean, Lawler, Gibson and Bannister were in one raft (life raft 2) and Winning, Lumtin, Rynan and Gould in the other with the EPIRB (life raft 1).

Life raft 1: (separate interview by Greg Halls)

The Crew deployed the drogue, which did stabilise the raft until the drogue line parted, some half an hour later (*Comment-tether line for drogue too small in diameter; no pockets for flares, knife, pump etc*). The crew laced up the hood flap to stop ingress of water, checked the contents of the life raft bag and secured themselves as best they could. Sometime between 2030 and 2100 27 December, the raft was inverted by wave action. Winning exited the raft (no safety harness), to re-right the raft in the recommended manner. He

had to cut the ties and tear off retaining patches on the hood flap, as he was unable to untie small diameter nylon *(Comment-need Velcro).* Upon re-righting the raft, it was inundated by further wave action and filled with water through the open canopy flap. A search for the bailer was carried out and it was found that the majority of the life raft safety bag contents, including some flares, had been lost during the inversion. *(Comment-safety bag has a draw string top-needs Velcro*). The raft was bailed using a plastic bag and a sea boot. Shortly afterwards further wave action inverted the raft which was re-righted in the recommended manner. During the evening the raft motion was quite erratic, obviously due to the loss of the drogue, surfing down waves and being inverted several times. As dawn approached, it was observed that the lower ring of the life raft was deflating. Investigation found that the top 2/3rds of the GME EPIRB aerial had broken off and had possibly punctured the lower ring. The pump nozzle and repair kit had been lost, and it took some time to re-inflate the section secure the hole with a bailing sponge. The crew continued bailing using the sea boot as water flooded the raft. During daylight hours on 28 December, the sea conditions modified and care of the raft and crew was somewhat easier, although every wave filled the raft. It was also noted that at some time during the evening the EPIRB had broken free of its tether and had separated from the life raft. At approximately 1600 hours on 28 December, an aircraft was heard and sighted to the east heading south. It then turned to the west and a red parachute flare was fired from the life raft. The aircraft did not respond to the flare. Approximately 20 minutes later the aircraft returned, and the crew fired their last red parachute flare, which was observed by the aircraft and flashed its lights. The crew was recovered, in fair condition some hours later, by helicopter. Winning and Gould commented that as conditions had moderated, they were fairly comfortable, and could have remained in the raft for until the following day.

Life raft 2:

Within 20 minutes, the crew heard a loud bang which proved to be the drogue breaking free of the raft. Immediately, the crew observed that the raft became, like a "beach ball' and was thrown about badly by the seas.

Inside was continuously flooded with water due to the conditions and the fact that a spout designed to catch rainwater consistently gulled water.

The crew were sitting with legs intertwined, and when lifted by a big wave, Stanley tore muscles in his hips and broke a leg.

The crew heard and felt the impact of a rogue wave about every 25 minutes, and one eventually rolled the raft upside down. In the condition the crew felt the raft was more stable as less area was exposed to the elements. Lawler talked about going outside to help right the raft, but jointly the crew decided it was too dangerous in the conditions. As air was becoming short, they cut a short 5" slit in the reinforced floor (now roof) which provided ample fresh air.

The canopy, now a floor, was destroyed through standing on it, and the raft was entirely rolled right way up by another huge wave.

Eventually, the raft was pulled up the face of a very big wave to the top, breaking and rolling the raft over several times. Three crew, Dean, Lawler and Bannister were washed out. Stanley and Gibson could see their mates in white water from the broken wave, already close to 100 metres from the raft, with the wind causing the raft to drift rapidly away (estimated by Stanley to be 2-3 knots).

Stanley and Gibson continued to be rolled throughout the day, and clinging to the damaged raft. Stanley was confident that they would be removed and was expecting to see SAR aircraft.

Sometime later in the morning (they think) they saw a plane go east about ½ mile away on the return on the same transit line. It did not see them.

They saw another plane at about 1700 hours (near dusk) and waved a yellow life jacket. Again they were not seen. Between them Stanley and Gibson had a strobe and mag light and decided not to light them unless they saw or heard an aircraft.

Eventually they saw a helicopter fly downwind of their position, and assumed (rightly) that it would be heading to the other WC life raft, which intact would have drifted faster.

A fixed wing aircraft flew from that direction and Gibson and Stanley lit their strobe and torch which the aircraft acknowledge d seeing by "buzzing" them 5 or 6 times.

A chopper returned, and sent a rescuer down to take Gibson. As the pair were being lifted they were dragged 50 or 60 metres sideways, as the result of the aircraft's auto-hover failing.

The chopper did not send a rescuer down for Stanley, but managed to get the sling directly into the raft. When Gibson put the sling on, he accidentally captured one of the raft lines, and the raft was winched up with him. This forced Gibson to deliberately slip out of the sling and drop some 20 feet to the water, and to be recovered on a second attempt.

<u>Crew Comments:</u>

- Hand held waterproof VHF.

  EPIRB tether stronger.
- EPIRB antenna of a different construction.

  Safety harnesses, lines in raft for exterior deployment of crew.
- Larger diameter tether on drogue and surrounding life raft safety lines.

  Method of tying/securing canopy flap.
- Pockets for life raft items/knife/flares etc.

105

- Life raft bag to have different closing/securing method.
- Safety course on flares and life raft deployment.

  One-piece bellows/pump/nozzle.
- Empty gas bottle damaged raft.

  EPIRB for each liferaft..
- Personal 'Strobes' and 'MiniFlares'.

CREW INTERVIEW – VC OFFSHORE STAND ASIDE
Adelaide 4/3/99

Attendance: J.Hallion, L.Hallion, B.Thompson

1. Boat prepared in Adelaide with delivery to Sydney by half the crew. Experienced heavy weather attempting delivery of boat to Sydney, crew seasickness, boat eventually trucked to Sydney. This left no time to do Telsta Cup and lead-up races for final crew preparation. JH stated crew experienced reasonable. D.Woods (Safety Inspector) had advised me earlier that the boat was the best prepared boat he had seen for a long race vis. diagrams of layout of safety equipment, briefing notes, radio notes plasticised and attached to bulkheads. New safety equipment including RFD liferaft.
2. Boat documentation good; found Race Briefing generally good, weather briefing 'a bit wishy washy'.
3. Boat & crew performed well prior to storm, with boat well positioned with vessels of similar size. Prior to weather change, good run down the coast. When wind increased to 35 knots, changed to heavy 80% size spinnaker, 2 reefs in main, boat running @ 17 to 19 knots with no round-ups or problems. Crew in safety gear (harnesses, wet weather gear).
4. Sunday am – Wind changed to SW, headed and noticed bigger boats inshore. Observed change in sea state, changed to storm jib plus 3rd reef in main. Wind then went light so changed to #4 and back to 2 reefs in main (dawn). JH stated a number of crew were seasick and the watch system had broken down. (8 crew on deck). The boat was underpowered in light conditions-crew discussion re alternatives.
5. Around midday, wind shifted to the west with rapid increase in velocity and wave height. Removed all sails, ran under bare poles east. Yacht difficult to maneuver @ 5 knots. Lashed main to boom – did not lash boom to deck. Hoisted storm jib, which blew out of track ***(ties? ed).*** Crew unable to recover so left sail as was (no inner forestay). Boat now in control heading 110 to 140 and comfortable. 30% of crew off watch.
6. At approximately 1415, a large wave with top 7 metres completely vertical, broke over the yacht. Yacht rolled 360 degrees, breaking mast at deck level, breaking the boom and imploding the deck. Windows shattered, storm boards missing. Deck damage could have been caused by broken mast and boom.
7. All 8 crew on deck were washed overboard during the roll, seven tethered to yacht, one not tethered 10m from the yacht (***John Culley-unable to find reason***). All overboard crew required the assistance of those who were below during the rollover, to get back on board the yacht-took 15 minutes. Crew then cut rigging and mast away using boltcutters. (***Yacht had an exceptionally large set of bolt cutters).*** Majority of crew suffered injuries during the rollover.
8. Yacht engine and HF radio unserviceable. Launched both liferafts. No problems in launching liferafts from below as coachhouse destroyed and yacht 40% filled with water. One liferaft failed to inflate, further tugs on the tether resulted in the tether breaking ***(probably at the weak link)*** and the lift raft was lost. Second liferaft deployed and tethered astern of yacht. Activated yacht EPIRB plus two personal EPIRBS. The crew were anxious and fearful.
9. Crew erected emergency radio antenna, HF u/s. Deployed red parachute flare and two orange smoke flares. Hand held VHF connected to emergency antenna and MayDay call received by ABC helo, which responded and was overhead within 15 minutes. Rescue helo arrived 20 minutes later, lifting 8 crew from the yacht via the liferaft. Second rescue helo lifted remaining 4 crew in a similar manner.
10. Helo transfer of first crewmember took some time due to conditions and lack of knowledge on procedures by yacht crew. (***Note: rescue methods by various authorities-one crew face to face, other crew holds survivor from behind. Found face to face easier. Snorkel, facemask and flippers used by one rescue crew, considered an advantage).***
11. Procedures by Red Cross and authorities at Mallacoota excellent. All crew hospitalisd for minor injuries.
12. Major problem with communication between CYCA Hobart and Owners wife. Whilst holding telecon with officials in Hobart, where she was advised that yacht was not in trouble but 1400 sked in progress, coverage of rescue on TV.

Comments by Crew/Owners:

1. Pre race documentation good. Because of yacht/crews sailing programme and being an interstate yacht mail system unreliable. Should get documents on Internet.
2. Two tethers on safety harnesses.
3. Review clips on safety harnesses.
4. Review personal flotation equipment – suggested Musto type.
5. Waterproof handheld VHF.
6. Liferafts to include EPIRB (406).
7. GelCel battery for emergency.
8. Review localised Man Overboard system, crew sling and locator system.
9. Crew education, first aid, safety at sea, recovery procedures, liferaft education.
10. AUSAR or helicopter rescue personnel to carry out briefing at Race Brief.
11. Review personal information system to public and crew member families. Hobart/Sydney system did not work. Families and personal friends given misleading and non-factual information when able to contact CYCA and authorities.
12. Weather updates at 6 hourly intervals.
13. Had they been aware that 80 plus knots of wind in Bass St., they would not have proceeded south.
14. Liferafts to be stowed on deck, preferably in cockpit well.

G.W.Halls

Record of Interview
"Zeus II"
February 17, 1999
RSYS
Grant Simmer/Howard Elliott

Present:
Jim Dunstan
Campbell Thornton
Paul Kerrigan

Very experienced crew. All had done Hobart before in Zeus. Experience was 2,5,6,10,11,20 Hobarts. 5 of the crew were on board Zeus during 1993.

This was the first year that Zeus did not do a lead up LOPS. However, the experience of the crew, with the boat, countered the need for this.

A week was spent preparing the boat from top to bottom. All equipment was serviced. Sails, ropes were checked/replaced. Fuel system was cleaned. Engine serviced. The boat has been maintained to Cat 1 standard for the past 18 years. The mast was shipped 3 years prior. The rig was checked (visually) in situ (forestay 9/32 others ¼). Zeus is a 19 yo GRP Currawong 30.

Kit: HF (Stingray) serviced prior to race. VHF (GME), GPS, RDF, AM Radio, HH Compass, full instruments. 2 EPIRBS (1 satellite). The crew all have their own safety gear (Musto jackets with built in PFDs) but the boat also has the required harnesses and lifejackets.

2 tethers are used when helming. Fixed tethers on cockpit strong points near companionway.

Race planning is minor with weather watched but race plan not complete untiled race day. Boat is provisioned and loaded with gear prior to Xmas day. Perishables are loaded Xmas day.

Watch system is 2 hrs on 4 hrs off. Officially into watch system at start of race, although most crew remain on deck until post sea mark and settled. Staggered so that there is a new person every hour. The watch system is adhered to rigidly. No MOB drill done but discussed in detail. Strategy is to recover from the leeward rail.

Had a good start. Remained RHS of course. Headed east out of harbour raised kite. Wind NE thro nite. Max 30kts. Max boat speed 14.7 kts (PB for the boat!). Broached to windward, but apart from that, uneventful.

27/12 Wind moved to WNW by 07:00. By 14:00 WSW, 3 reefs and storm jib. Wind to 52kts. Had continuous 4483 monitor. Heard other boats in trouble. Heard weather report from Sword. Heard storm warning 20:00 previous nite. Boat was comfortable and fast. Wind was 060 apparent.