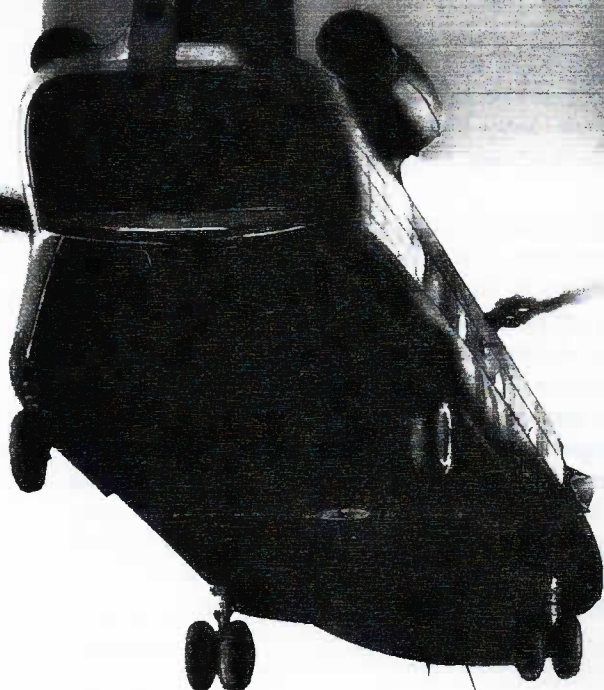


The *Tiraumea* Rescue



by FltLt G.A. Frost

ON 26th April 1989 a Chinook helicopter from No 12 Squadron was involved in the dramatic rescue of a family of four from the disabled yacht 'Tiraumea', some 100 nm east of Coolangatta, Queensland. Readers may recall the rescue, the event received wide media coverage at the time. Perhaps not so well appreciated though are the actions that transpired in setting up the rescue operation, and indeed the rescue itself. FLTLT Grant Frost, the pilot who flew the rescue mission, has been kind enough to recount the flight from an aviator's viewpoint, for SPOT-LIGHT magazine, and we are grateful for the contribution.

With the recent phasing out of this versatile helicopter from service, it is perhaps appropriate that this inspiring article serve as its epitaph.

The preliminaries

At about 0200 hrs on 26 April 1989 the Executive Officer (XO) of 12SQN received a tentative warning order from Air Headquarters Australia (AHQAUST), that a Chinook may be required to rescue four persons (one a seven month old baby), from a liferaft 150 nm ESE of Brisbane. He in turn warned out a squadron pilot and the Duty Engineering Officer that a possible SAR task may be developing.

At about 0420 hrs the rescue tasking was confirmed by AHQAUST and the XO promptly recalled a flight crew to 12SQN Headquarters for briefing. He also informed the Duty Engineering Officer that an aircraft, fitted with an internal ferry fuel tank, would be required as soon as possible. The 12SQN Duty Crew was then recalled.

All members of the nominated rescue crew, including myself, were present at 12SQN by 0510 hrs. The XO by this stage had received a brief summary of the task requirement as prepared by the Brisbane Rescue Coordination Centre (RCC). Apparently a family of four was stranded on a disabled yacht at a position 150 nm ESE of Brisbane. A container ship was enroute to the yacht with an ETA of 0900 hrs but was not expected to be of great assistance due to the high seas. A CAA aircraft, equipped with VHF DF homing equipment, had been orbiting the yacht since the early hours of the morning.

12SQN duty crew worked fast and to their credit, had by 0620 hrs prepared Chinook A15-002 for the flight, including fitment and testing of the internal fuel tank. We also decided to remove the cargo hook to allow unobstructed hoisting through the hook hole in the aircraft.

The flight crew received a briefing on the rescue details then available, by the XO. By this time the Duty Medical Officer and Nursing Officer had arrived at 12SQN with medical equipment and stretchers. Lack of details regarding the condition of the people on the yacht particularly the baby, made it difficult to develop possible rescue scenarios during briefing, leaving it up to us really 'to play it by ear'. However to assist, Brisbane RCC arranged for a Queensland State Emergency Service (SES) winchman, and a CAA officer with two Air Sea Rescue Kits (ASRK), to be available for pick up at Brisbane airport.

The flight

We departed Amberley at 0640 hrs with a crew of four and two medical personnel. The transit to Brisbane Airport to pick up the personnel and equipment was, of necessity, conducted at about 300 feet AGL due to low cloud and rain.

We finally set course from Brisbane at about 0700 hrs for a position 077 degrees at 120 nm Brisbane, understood to be the position of the distressed vessel. The only navigation aids available to us were Brisbane NDB, DME (Australia) and DME (International).

The rescue crew now consisted of the following personnel:

- | | |
|-------------------------|------------------|
| • Fltlt Grant Frost | Aircraft Captain |
| • PltOff Glen Foster | Copilot |
| • WOff Neil McCamish | Loadmaster |
| • FSgt Peter Renton | Flight Engineer |
| • Fltlt Greg Hanson | Medical Officer |
| • FlgOff Janine Roberts | Nursing Officer |
| • Mr. Brett Mitchell | SES Winchman |
| • Mr. Dave Parr | CAA Dropmaster |

While passing the northern tip of North Stradbroke Island, Brisbane FSU informed us that the revised position of the yacht was actually 60 nm south of the position initially given (ie, a new position of 105 degrees, 120 nm Brisbane). We quickly calculated a new course to steer for the updated position and, due to the lack of any on board specialised navigation system, the new bearing of the yacht from the Brisbane NDB was then intercepted and flown. By this time both DMEs had unlocked and thus we were unable to make an accurate calculation of our ground speed. However, we transmitted an ETA of 0810 hrs to the CAA aircraft on station at the yacht.

Enroute to the yacht Brett Mitchell was thoroughly briefed on the rescue slings and the rescue hoist procedures to be used. At about 0750 hrs the CAA aircraft on station radioed us that the container ship was only 1 nm from the yacht but unable to do anything due to the high seas and the possibility of losing some of the containers if the ship steamed abeam to the swell. A VHF DF homing with the aircraft on station was requested about 10 minutes prior to the original ETA. However, before the homing procedure began, a large container ship was sighted on the nose at 3 nm. A fly past revealed that this ship was indeed the container ship located just 1 nm from the yacht. By good fortune, we had flown directly to the yacht with only the Brisbane NDB as a navigation aid.

The rescue

The helo arrived overhead the yacht at about 0800 hrs. I estimated the local weather conditions as winds of 20-25 kts, with swells of 15-20 ft, under a broken stratus cloud base of 800 ft AMSL.

Through the CAA aircraft (which was in contact with the yacht), I requested that the boat's crew lower their mast to enable the rescue hoisting to take place from the vessel itself. The yacht's skipper then cut the mast lines with bolt cutters and, although it fell over the side of the boat, it remained attached at the base. Also, when the mast was 'dropped', the radio antenna broke off and consequently no further radio contact was possible with the crew. Another complicating factor noted during a closer inspection of the vessel, was the numerous lines, rigging etc cluttering the vessel's deck and which might cause fouling of the rescue hoist cable.

Brett Mitchell was then hoisted down to the yacht from

about a 50 ft hover. Due to the heavy swell and the yacht drifting on the wind, plus the lack of available external hover references, an accurate hover was difficult to maintain. On the first attempt to lower Brett he hit the radar on the stern of the yacht, due to the movement of the yacht in the swells. We quickly winched him back up and into the helo to check for injuries. Brett indicated that he was OK and elected to continue with the rescue.

It became apparent to me that hoisting onto and from the yacht itself would be too risky, and that the people on the yacht would have to get into liferafts. We had previously agreed that to get into the water with only a life jacket would be too dangerous. So under the supervision of Dave Parr, one of the ASRKs (which consisted of a pair of liferafts connected by rope), was dropped from the helo in a 75 ft hover taxi upwind from the yacht. Because of the strong wind and the yacht movement in the swell, the liferafts drifted to within about 15-20 feet of the yacht. The aircraft downwash was then used to try to blow the liferafts back to the yacht. This took place from about a 25 ft hover. One crewman was positioned to warn when the swell was getting close to the aircraft so that the hover height could be varied to avoid being hit by the crests. Thus it was necessary to rhythmically climb and descend the helo, in order to maintain an approximate 25 ft hover relative to the swell.

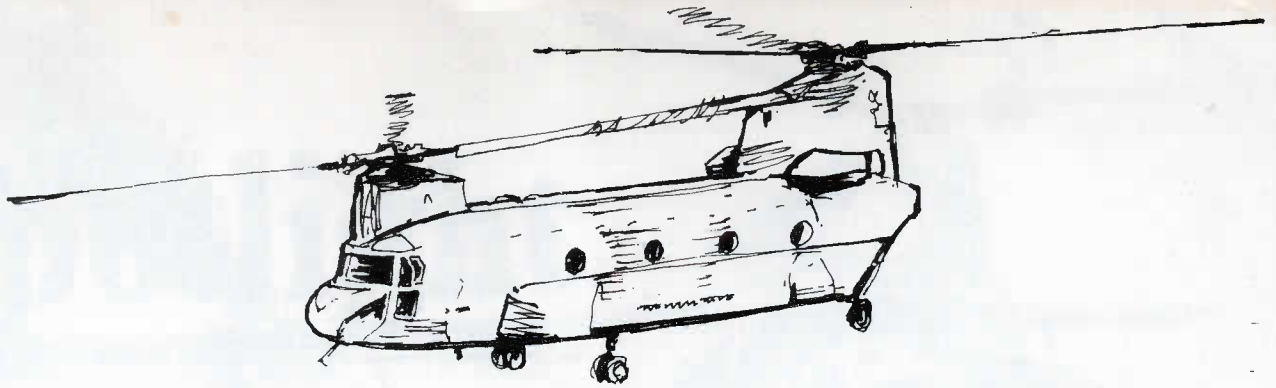
While the downwash had some effect on the liferafts, we were unable to 'steer' them over to the yacht. After about three minutes of trying to manoeuvre the liferafts in this way, one of the yacht's occupants jumped into the sea and with some difficulty, swam about 20 feet and climbed into one of the liferafts. More 'pushing' of the liferafts was then attempted, but by this time they were clearly drifting further away from the yacht. When the liferafts had drifted about 50 feet away a second person suddenly leapt into the swells, and again with difficulty, swam to the same liferaft.

The situation now prevailing was: two people (both males) in a liferaft about 100 feet from the yacht, and with the mother and baby still in the vessel. I decided to launch the remaining ASRK for the mother and baby, using the same height as the first launch. But once again, due to the swell and boat movement, the liferafts just missed the yacht. I then positioned the helo to try and blow the liferafts toward the yacht, but again this was not too successful. It was then decided that another attempt to hoist the mother and baby

Pictured in front of a Chinook after a later presentation to the crew at Brisbane Airport are, from left, Peter Quarrie, WOff Neil McCamish, Bryce Quarrie, FSgt Peter Renion, FltLt Grant Frost (aircraft captain), Lyn Quarrie (holding baby Steven) and PltOff Glen Foster (copilot).

(Rescue crew missing from the picture are the medical staff FltLt Greg Hanson and FlgOff Janine Roberts; the SES winchman Mr Brett Mitchell; and the CAA dropmaster Mr. Dave Parr.





from the yacht's deck would have to be made. As I was repositioning the aircraft for another hoisting attempt onto the yacht, the mother, with the baby, jumped into the swirling sea and began swimming to one of the liferafts. A quick change of game plan and an even quicker circuit with the helo was then made to hoist Brett directly down to the mother. By this time she had reached a liferaft that was upside down, but with the baby was unable to get onto it. Instead, she clung to the side of the liferaft while at the same time supporting her baby—no mean feat considering the conditions!

Brett was then hoisted down to the liferaft. With the large swell and the helo downwash blowing the liferaft around, it was difficult to place him right alongside the mother. However he finally reached her and pushed her up onto the upturned liferaft. After attaching her to the rescue sling, Brett, the mother, and baby were then hoisted up into the aircraft. During this exercise I found it extremely difficult to maintain a stable hover reference on the liferaft and the helo crewmen had to 'call' the aircraft back over the liferaft about every 5-10 seconds. Brett was having his fair share of problems too, as the mother had become fouled with rope while on the liferaft necessitating a quick unravelling job prior to hoisting.

As a stable hover over the liferaft was difficult to maintain, the people in the rescue sling were picked up from a position not directly underneath the aircraft. This caused a large 'pendulum' swing as they were being hoisted. With such large oscillations during hoisting, the hoist cable periodically impacted the aircraft hook hole sides causing some damage to the cable. It took both crewmen to eventually damp out the swings and bring everyone into the aircraft. The doctor then attended to the mother and the baby while the aircraft was positioned for another hoist.

The next hoist went much the same way as the first, the survivor this time becoming entangled with the sea anchor line of the liferaft which had wrapped itself around his neck. About five minutes was spent in a 30 ft hover while Brett attempted to untangle the survivor. The crewmen ensured that plenty of slack cable was made available so that Brett and the survivor were not inadvertently lifted clear of the water, possibly strangling the latter. The remaining crew member from the yacht eventually located the knife in the liferaft and cut the sea anchor line. Brett and the now freed survivor were then hoisted up to the aircraft with the sea anchor still attached (it now resides proudly in 12SQN crewroom)!

The final hoist was the easiest of all with no major problems being encountered. All four people from the yacht were now safely in the Chinook.

Return to Brisbane

At about 0915 hrs (ie, over one hour after we arrived overhead the yacht) a happier plane load of people departed for Brisbane. The medical personnel examined the survivors and remarked that they were in good shape considering their ordeal. We disembarked the yacht's crew near the domestic terminal at Brisbane airport at about 1020 hrs, to the waiting arms of an ambulance and the media vultures. By this time our fuel state had become quite low so we departed immediately for Amberley. We arrived back at home base at about 1050 hrs. The entire mission took 4.2 flying hours with of course no refuels. POB on the return trip consisted of the four aircrew, two medical personnel, the SES winchman, the CAA dropmaster and the four yacht crew members, a total of 12 people.

If I had to summarise the flight then I would have to say that it was a personally rewarding sortie (after all, we did save four lives)! If I had to do it over again I would, but clearly from the above account there were a few valuable lessons learned (quite apart from the yacht and crew being caught out in such foul weather).

As mentioned earlier, maintaining a stable hover without external references was a major problem, as was the downwash effect on the liferafts. In an attempt to alleviate these problems, the aircraft was hovered about 20 feet downwind from the liferafts with the downwash pushing the latter into the strong wind. To enable me to see the liferafts, sometimes the aircraft was hovered at about 25 ft with the wind coming from the 2-3 o'clock position. This caused the liferafts to appear in the pilot's side lower window at the 3 o'clock position, thus providing me with a bit of a hover reference relative to the liferaft. In addition to this arrangement, the crewmen were calling the aircraft over the liferaft about every 5-10 seconds. The large swells often resulted in the aircraft, which was at a 30 ft hover one instant, suddenly being reduced to a 15-20 ft clearance above the sea and then 'rising' back to 30 ft or higher.

The crewmen in the back of the aircraft had their hands full in damping out the large oscillations during the hoisting operations caused by the displaced hover. On some of the hoists, the survivors were at one moment in the liferafts with the hoist cable slack being gradually taken up, and then suddenly jerked into mid air as a wave trough came through.

As a way of concluding this article, it would be remiss of me if I didn't pay tribute to the remarkable workhorse that enabled us to carry out this mission. In its 15 years or so service in the RAAF, the Chinook helicopter has been called upon to do some quite remarkable things and with its passing, a significant capability has been lost from the ADF. I for one, will certainly mourn the loss.