DETECTIVE SENIOR CONSTABLE GRAY

Q1 This is an electronically recorded interview between Detective Senior Constable Stuart Gray and Mr Richard James Hooper at Tamar Marine in Launceston on Friday, the 17th of September, 1999. The time by my watch now is 3.27pm. Also present is Senior Constable David Upston from the New South Wales Water Police. To my left is Mr Tony Boyle from the Australian Maritime College. Just for the record, Jim, could you please state your full name?

A Richard James Hooper.

Q2 And your date of birth.

A 21st of December, 1945.

Q3 Your current address?

A 142 Sheffield Drive, Spreyton.

Q4 And your occupation?

A I'm a life raft surveyor.

Q5 O.K. As I've already explained to you when we saw you yesterday, Senior Constable Upston and myself are making inquiries in relation to the 1998 Sydney to Hobart Yacht Race. Part of our inquiries have led us to safety equipment, life rafts and harnesses and various things like that. And the reason we're here to speak to you today is in relation to cylinders and heads used in life rafts and also life rafts themselves. From your experience you can offer us some, some details in relation to that sort of thing.

If I could first start by asking what qualifications you have as a life raft surveyor?

A I've been trained by R.F.D Australia Pty Limited. I'm required under the rules that they and A.M.S.A. have set to be retrained every 3 years. My initial training was in 1990 and I've been doing this work since then.

Q6 How many life rafts do you think you've surveyed in your service?

A 20 short of 1,000.

Q7 And, so you've been in the business for, since - - -

A Yes.

Q7 - - - 1990?

A Yeah.

Q8 And prior to that what were you involved in?

A I was involved in sails, mainly with the fishing fleet and I've, was 6 years at sea with the State Fisheries Department and I was in yachting prior to that since about 1973.

Q9 O.K. Now you're probably aware that during the 1998 Sydney to Hobart Yacht Race a vessel by the name of Stand Aside tried to deploy a life raft, and in fact that life raft didn't inflate. So what I'd like to know is, is it possible for you to give us some sort of ideas, or reasons why life rafts may not inflate, from your experience?

A From my experience, there's either, there's a fault with the setting up of the painter line or there's a fault with the cylinder itself.

Q10 O.K.

A The fault with the painter line is - - -

Q11 Now what's a painter line?

A A painter line is, in this raft here - - -

Q12 Yeah.

A - - - that's external to the, to the strong point on the boat. The painter lines ..... through these elastics here. And this end of it goes through the operating head of the cylinder, and this end of it is tied to the strong point of the life raft itself.

Q13 Right.

A So that when all this is deployed the, the life raft is held by its, what I'd call painter patch and the, the strong point in the life raft.

Q14 O.K.

A And if this is incorrectly laid out, as you can see here, when this pulls, it just breaks out.

Q15 Right.

A Until you get to the end, then it pulls the, the operating head and, and you're left with that on the life raft. So - - -

Q16 .....

A - - - while you're hangin' onto this, you've got the life raft.

Q17 Right. O.K. Is there a breaking strain required on that painter line?

A Yes. In a, up to an eight man it has to be 1750 pounds. It has to break at that.

Q18 Right.

A That is its required breaking strain, not - - -

Q19 Right.

A - - - it has to be at least that strong. It has to break at that though. It's designed - - -

Q20 Right.

A - - - to break.

Q21 Right. O.K. O.K. Now apart from the painter line problems, the cylinder.

A The cylinder. In my experience most problems with cylinders have been with aluminium cylinders of which I have one here. And generally they're related to faults in the cylinder itself. The most common fault is a crack in the neck where the valve screws into the top. Yes, you can see, there's a tapered thread and there's a lot of stress on that point. A crack develops, the gas leaks out of there and in a short, reasonably short period you've got no gas left in the cylinder. So if you pull off, activate such a life raft without it you've got nothin'.

Q22 All right.

A Nothing with that.

Q23 O.K. Now what type of cylinders are there apart from aluminium? There's - - -

A There's steel.

Q24 Right.

A Now steel cylinders generally, I haven't had any trouble with.

Q25 Right.

A Even the most corroded steel cylinder has held it's gas charge.

Q26 Right. Are aluminium cylinders still being produced and used today? Or being replaced by steel slowly?

A They're - - -

Q27 .....

A They are rare. There's some of them in aircraft work where weight is a significant factor - - -

Q28 Right.

A - - - and in some life rafts where weight is held to be a significant factors.

Q29 Right.

A Such as pro-saver life rafts for example, which is very light.

Q30 Right.

A They have aluminium cylinders.

Q31 O.K. Now if that in fact was leaking and that was packed in the life raft, where in fact would that gas go?

A Just out the crack - - -

Q32 O.K.

A - - - and into the, into the life raft canister.

Q33 Right. It would have no influence on, on inflating the life raft in any way, slowly?

A Only if there was a fault, a leak in the valve itself - - -

Q34 O.K.

A - - - which is in here.

Q35 You might like to tell us about leaks in the valves.

A O.K. I had an experience with a life raft which had an aluminium cylinder, and I took it out of the raft and it was, I noted it was very light. I weighed it and the gas, the cylinder weighed tare weight. In other words there was no gas in it. So I took the valve, the, I took the cylinder with the valve and a spare steel cylinder to our local cylinder service place, Liquidair, and I asked them to put the old valve into the steel cylinder and certify that cylinder and fill it to the charge required.

Q36 Right.

A Now, two days later they rang me and said that, Your cylinder's ready, there was nothing wrong with that cylinder, we've refilled it. And I asked them what was wrong, and they said the valve was leaking.

Q37 Mmm.

A Now that rang alarm bells to me, because if the valve was leaking the gas only had one path, and that was out through the, this port into the high pressure hose and into the raft itself.

Q38 Right.

A Now there was no gas in the raft, so that led me to think that maybe the cylinder was empty when it was put in there. The, I rang the owner of the raft and I asked him did he have any trouble with the raft during the year. He said, Oh, yes, he said, the, the canister

came apart and, which I took it back to Quinn's and they fixed it. I didn't elaborate what I thought - - -

Q39 Mmm.

A - - - but Quinn's had taken the gas out of the life raft, the, the canister had came apart because the life raft was slowly filling up with gas.

Q40 Right.

A And they took the gas out of the, the life raft and reclosed the cylinder. End of story.

Q41 Mmm.

A Well I reacted to that by ringing the R.F, because Quinn's are a, a R.F.D. accredited service station, I rang the quality assurance officer in Melbourne, of the company, and I told him of my findings and he went to Quinn's to do a, an audit. A quality assurance audit. Now I, I didn't, I didn't hear any, of any results. I didn't hear what had, what happened, but - - -

Q42 Mmm.

A - - - it was a dangerous situation and that man had no life raft - - -

Q43 Mmm.

A - - - literally.

Q44 Certainly.

A Mmm.

Q45 So with that valve on that particular cylinder there, how does it fail? Are you able to sort of tell us how that, that fails?

A Well - - -

Q46 How it would fail, leak?

A The gas is actually a liquid.

Q47 Mmm.

A The cylinder lies on the side and this is called a siphon tube.

Q48 Yeah.

A And that ensures that only liquid goes into the valve, not gas.

Q49 Right.

A So this valve here is on a spring and an internal valve within, inside, and the path of the liquid gas is through the siphon and out through the valve and out this port.

Q50 Right.

A And that is activated by the, this is a Walter Kitty operating head. The painter line that we've already looked at is attached to that. Now when that painter line is pulled it twists this against a thread and it, it opens.

Q51 Right.

A Which it has done now. And that pushes against that and - - -

Q52 Right.

A - - - opens it. It has no choice.

Q53 So that, that bit there - - -

A That bit there.

Q53 - - - comes up - - -

A Yeah.

Q53 - - - pushes against that?

A That's correct.

Q54 Right. O.K.

A So the gas, the liquid gas comes up there, out into the raft itself, and once it, it expands in the raft - - - -

Q55 Mmm.

A - - - it turns to a, a, a gas rather than a liquid - - -

Q56 Mmm.

A - - - and it expands 16 times its, its volume very quickly.

Q57 Right.

A That is why the life raft can go up in such a short space of time.

Q58 Mmm.

A Otherwise if it was just straight gas, it would take a lot longer.

Q59 Right. Now this head that you've shown us here, is this a common head?

A This is the, this the most common one around.

Q60 Right.

A Newer life rafts are, are getting heads from a company, the German company called Thana, and the valve is changing, where they have a piecing disc, which this one has - - -

Q61 Right.

A - - - and that port goes, the gas goes directly out that port to the, to the life raft and when you open this one up - - -

Q62 That's the piercing - - -

A Yeah. It, that - - -

Q63 How does that - - -

A - - - that comes out and pierces

Q64 Pierces - - -

A - - - that disc and allows the gas to come through. This is a, a Zodiac one. There's your, probably easier to see in this.

Q65 .....

A This is, this is loaded and, and that knife comes down, pierces the disc, that's attached to the painter line (DEMONSTRATES AUDIBLY) pulls it back, she's out - - -

Q66 Right.

A - - - and your life raft's away. It's a cheaper valve to make. That's - - -

Q67 That's all right.

A That's why they make it.

Q68 Right.

A That's why things are startin' to go this way, and these are a bit dearer. They're quite dear to manufacture.

Q69 Mmm. Would you be able to take the top off that and reload that and demonstrate the working - - -

A Yes.

Q69 - - - mechanism for us? Just so we've got it. This is ordinarily how you would - - -

A Yes.

Q69 - - - reset it?

A There's a window in there - - -

Q70 Right.

A - - - which shows red.

Q71 Yeah.

A Which it's showing now. It means that this head has been fired.

Q72 O.K.

A I'll just remove that. And to reload it, you put that in there, spin it, and that goes into the small hollow there - - -

Q73 Yes.

A - - - to, as a locking device.

Q74 Yeah.

A Now we're green.

Q75 And that, the green indicates that it's - - -

A It indicate - - -

Q75 - - - locked and loaded - - -

A - - - indicates that it's - - -

Q75 - - - so to speak?

A - - - locked and loaded, and as you can see - - -

Q76 Right. So - - -

A - - - the thing is screwed in.

Q77 So when that's pulled - - -

A Yes.

Q77 - - - the head, that little thing comes up and that's what goes onto the valve?

A That's correct.

Q78 O.K. Can we just put that down. So basically when it comes to looking at heads, if you're a life raft surveyor, that head is fairly foolproof, would you say, so far as locking it, reloading it?

A Yes.

Q79 I mean - - -

A It's been - - -

Q79 - - - too simple - - -

A It's been, it's a simple reliable device that's been in production for, oh, decades.

Q80 Right. O.K. Yeah. Tony?

MR BOYLE

Jim, have you had any trouble or know of any situation where the Thana head or the Zodiac type head, where you've got the bursting disc - - -

A Mmm.

MR BOYLE

- - - or the bursting disc itself, or the disc ..... ruptured, is actually the seat has leaked and gases escape through the seat?

A No. But if it was to occur the gas would go into the raft.

MR BOYLE

Right. And, so that would be, you think, evidenced by the fact the raft would begin to inflate, pop the canister?

A Yes, it would, it would begin to, to inflate within the confines of the canister and - - -

MR BOYLE

Is there - - -

A - - - .....

MR BOYLE

Oh, sorry. Is there much chance that some of the gas could in fact leak out through the thread from the high pressure hose to, to the cylinder head by virtue of the fact that the, that thread is meant to, to only seal properly under high pressure?

A Not really. There's a copper gasket that goes into there, and that's screwed down to 55 pounds of torque onto the top of the cylinder - - -

MR BOYLE

O.K.

A - - - and that's pretty gas tight.

MR BOYLE

What about where the, the high pressure line actually goes onto the raft fittings? Is that threaded on?

A That's threaded on.

MR BOYLE

And is it a similar arrangement where it's, it's actually pre-tensioned, or - - -

A It, it is tensioned and a, a small gasket goes between them.

MR BOYLE

Right.

A On that occasion. But, but all life rafts, the high pressure hoses don't have gaskets. These don't, for example. It's just a, a, a press fit of that onto, there's the mating services.

MR BOYLE

So with a, with a system like this one - - -

A Mmm.

MR BOYLE

- - - is there any possibility that if there was a, a very slow leak, say in the valve head mechanism, that some of that gas might not in fact find its way into the life raft, but in fact leak out through the connections, so that the, you wouldn't have any evidence of the fact the cylinder - - -

A That - - -

MR BOYLE

- - - was - - -

A That would have to be loose.

MR BOYLE

- - - was empty? Oh, it would - - -

A Yeah.

MR BOYLE

- - - have to be loose?

A It would have to be loose.

MR BOYLE

O.K.

A 'Cause they're, they're pretty accurate mating services and they - - -

MR BOYLE

O.K.

DETECTIVE SENIOR CONSTABLE GRAY

Q81 Now so far we've gone through the painter line which can cause a failure, the gas cylinder leaking, or in fact empty - - -

A Mmm.

Q82 Is there anything else that you can tell us about which could cause a life raft not to inflate at deployment?

A O.K. We go back to our painter line again.

Q83 Yeah.

A This, this is what's called a, a painter link.

Q84 Yeah.

A And there's an inch hole through there, and to ensure that this goes through, there's no knot. That's just laced through itself - - -

Q85 Yeah.

A - - - and taped. And that just pulls straight through that hole.

Q86 Right.

A Now if somebody were to put, I'll use the other end of it for clarity, if someone was to put a, a, a typical life raft knot, the bowman, through there, you've got

to pull that knot through it, and it probably won't, so it hangs up and won't pull through.

Q87 Right.

A But you, the instructions with the life raft tell you to throw the life raft over and pull the painter line out.

Q88 Right.

A But when you can't pull the painter line out you, then it would be self evidence of what was happening.

Q89 Mmm.

A An experienced person who knew how the life raft worked, could use a knife, cut the thing out and actually manually activate the raft.

Q90 Right.

A That's what I'd do. But just the, also if the cylinder was empty, you can open up the canister, and use the bellows. It might be a bit slow but you've got a raft.

Q91 Yeah.

MR BOYLE

Q92 Do you pack many Roaring Forties life rafts?

A Yes.

MR BOYLE

How, how does the hole, size of the hole for the painter in the Roaring Forties canister compare with, just say this one here in front of us as far as - - -

A It's almost identical.

MR BOYLE

It's almost identical. So it would be the same sort of problem that occurred with that particular type of raft?

A Yes. And in fact their manual tells you that you loop the painter line through itself and tape it. You don't put a knot on it. You can put a knot on the outside, that doesn't matter, but you, you can't put a knot on the inside, otherwise you get a hang up.

MR BOYLE

And is the system for ..... the painter within the Roaring Forties life raft similar to this one?

A The earlier ones, the, the R.F.D. Petrels were in fact made by a company called Dentrack and Dentrack Industries are in fact Roaring Forties. They still make them and that are that raft, they're just under a different brand name.

DETECTIVE SENIOR CONSTABLE GRAY

Q93 O.K. So far as the packing of life rafts and the life, the right life raft in the, in the right packing box - - -

A In th right packing box?

Q94 Yeah. I mean suppose that you purchase a life raft in a Valice?

A Yes.

Q95 And a owner asks you if you could pack it into the hard box of that particular life raft.

A Yes.

Q96 And you don't have that particular life raft box.

A Yes.

Q97 So you substitute.

A Yes.

Q98 Is that what you do?

A No, that's not what I'd do.

Q99 Right.

A Because that, that, then you're starting to deviate from the manufacturer's manual.

Q100 Right. Can you see complications in that?

A Yes and no. From the sheerly practical point of view, no.

Q101 Mmm.

A But a, I have seen mix and match efforts on a lot of life rafts, including some that are registered through A.M.S.A.

Q102 Right.

A But, and they work - - -

Q103 Mmm.

A - - - from a practical point of view. But one has to be very careful of, of deviating from the manufacturer's manual, because if you do have a problem - - -

Q104 Mmm.

A - - - you have to be able to justify why you did.

Q105 O.K. Say for argument's sake, this container here is for a what sort of life raft?

A A six man Petrel.

Q106 O.K. Supposing you took delivery of a six man Petrel in a Valice?

A Yes.

Q107 And it's set up, just looking at this box here - - -

A Yes.

Q107 - - - this is the way it's set up in the box - - -

A In the Valice or - - -

Q108 From the Valice into the box - - -

A Yeah, yeah.

Q108 - - - sorry. And in fact you didn't have a Petrel box.

A Yes.

Q109 And you had another box and you can see where the painter connects here?

A Yes.

Q110 Suppose it was here for argument's sake?

A Yes.

Q111 Is that going to complicate things in you packing that life raft into there?

A Well I wouldn't like it. What you want is the straightest possible pull from the painter, the painter line. As you can see from the operating here, there's a bit of flexibility and that will pull that way and in fact in those canisters, that's what it does.

Q112 Right.

A The, the ..... position in the cylinder is there - - -

Q113 Right.

A - - - pulls that way.

Q114 O.K.

A But if it had to pull, say across there - - -

Q115 Yeah.

A - - - well there's a worry, 'cause the life raft's in the way.

Q116 Right. So one would have to carefully examine the way the head's positioned - - -

A Yeah.

Q116 - - - and the way it's going to be pulled?

A Well that's correct. And, and the manufacturer's manual puts it that way - - -

Q117 Yeah.

A - - - they've done testing, they've done testing to see how, how best it works - - -

Q118 Mmm.

A - - - so you're guided by them and, and frankly you're a fool if you diverge.

Q119 O.K. So we, is it fair to say then, so far as life rafts not inflating, this could be a complication? A reason, a possible reason?

A A possible reason.

Q120 But the life, but the canister could be, I mean the canister could be opened and manually - - -

A Yeah.

Q120 - - - inflated?

A Mainly it, it would, the, the most likely cause of the complication would be a hang up of the painter line rather than - - -

Q121 Right.

A - - - any fault of the head, the operating head.

Q122 O.K.

MR BOYLE

With, you've got a key mark one head in your hand now.

A Mmm.

MR BOYLE

Now Zane Boucher sort of demonstrated, convinced us that you can pull it from any direction, it will - - -

A Yeah.

MR BOYLE

- - - activate this head, but you're saying that the problem could be the friction between, between the port - - -

A Well - - -

MR BOYLE

- - - and the actual head because of the life raft in the way.

A It will pull from any direction, that's true.

MR BOYLE

Mmm.

A In that life raft, for example, the, the, the, the head sits there and the painter line goes out there.

MR BOYLE

Mmm.

A In this one it's the reverse. But to go across is - -

MR BOYLE

All right. Now let's have a look at the, the Zodiac head.

A Mmm.

MR BOYLE

And that, what, what's your opinion on that with respect to a pull that was other than in a longitudinal, or in the same axis as the pin. Do you think that this one would inflate, or would you have a, a problem actually getting the .....

A No, you would have a problem. This one has to have it straight.

DETECTIVE SENIOR CONSTABLE GRAY

Straight. Right. O.K. So there's no way that you could have that situated like that to be pulled?

A No.

Q123 Can you see that, David? So that - - -

A So that - - -

Q123 - - - as you say, that has, that would have to be - - -

A It has to be - - -

Q123 - - - in that - - -

A Yeah.

Q123 - - - set up?

A That - - -

Q124 So that would be pulled straight out.

MR BOYLE

And just to extend that, what about the Thana head? This one has, has the, the string.

A Well that's a plastimo(s.l.) head. It's .....

Q125 Oh, sorry, is it plastimo?

A It's a type of plastimo head. That's - - -

Q126 So that would tend to pull from - - -

A Well, yeah, well, it'd pull from most directions.

Q127 Most directions.

A Yeah.

DETECTIVE SENIOR CONSTABLE GRAY

Q128 O.K. O.K. So we've got those three areas, the cylinder, the gas, the painter line, possibly, possibly packing. We just demonstrated that head for example?

A Yeah.

Q129 Some, some complications which could arise. Is there anything else that you can think of that can cause problems?

A I have seen a life raft being tied up with 50 pound breaking strain line, tied twice round it.

Q130 Mmm.

A And the, the raft put in the, the canister and the line left in place.

Q131 Mmm.

A And the, the raft in, inflating and expanded would have to break that 50 pound line.

Q132 Mmm.

A It probably would, but not before it damaged the life raft.

Q133 Yes.

SENIOR CONSTABLE UPSTON

Q134 You were telling me on the telephone last week about that incident of St Helen's where a raft's been ..... - - -

A Oh, yes.

Q134 - - - and .....

A Yeah.

Q135 Would you like to elaborate on that for us?

A Yeah, I think I have a, yes.

DETECTIVE SENIOR CONSTABLE GRAY

Q136 Would you like to come over here, Jim, and - - -

A Yes.

Q137 Right.

A This is a Beauford canister, it's solid fibreglass and it's designed to have a, a gasket strip glued to the bottom and to the top. Spin that around and that's sandwiched in between it. And there's a weak link in the, the back of the, the, the gasket strip and it's designed to split along there. What happened on this occasion was an unqualified service station had laid that up at, in, right up in the corner. It had glued the, the strip to the bottom, to the sides and to the, the canopy top. Now what the meant was that this was glued on three sides instead of just two and the weak link couldn't work. So the, in trying to burst its way

out of the canister it actually cracked the canister, and about a third of the life raft came out, tore itself, blew off its relief valves and that was the end of that.

SENIOR CONSTABLE UPSTON

Q138 When did this happen?

A Probably 4 or 5 years ago.

Q139 Down off St Helen's?

A Yeah, it was, the raft was serviced in, I think in Sydney.

DETECTIVE SENIOR CONSTABLE GRAY

Q140 Right. So that rubber there should in actual fact split along that - - -

A That's where it - - -

Q140 - - - valley there?

A That's where it splits.

Q141 Right. Can you see that, David?

SENIOR CONSTABLE UPSTON

O.K.

A And the Petrel's also have a weak link in their painter line when their painter, this is the old painter, the old seal strip off this raft and it's glued flat on both sides, and there's your weak link.

Q142 Right.

A So it missed.

Q143 Oh, O.K. So she's - - -

A Bang.

Q144 So she opens up?

A She opens up.

Q145 Right. O.K.

MR BOYLE

And just getting back to the earlier point about the fact that you have seen empty cylinders come in - - -

A Yeah.

MR BOYLE

- - - on how many occasions have you had, experienced and empty cylinder in a life raft that you've gone to service?

A Three times.

MR BOYLE

And what was the most recent time that that's happened?

A 1980, I think 1987.

Q146 All right.

A 1997, sorry. It's - - -

Q147 And have you had any experience of a new life raft coming in for its first service having a empty cylinder, or near empty cylinder, or partially empty cylinder?

A Yes. A first service for a Zodiac life raft, and I test weighed the, the cylinder, and it was, wasn't empty, but it was very light. It only had about a third of its charge in it. And I examined the, the cylinder, bearing in mind that this was a, a, a new raft in for its first service, and the cylinder was actually produced in 1957. It was a secondhand fire extinguisher cylinder. And I took the cylinder to

Liquidair and, to get a, a report from, and, and for it to be condemned because it was, there was gunna be trouble over it. And cross all the t's and dot all the i's, and they condemned it and in fact found the leak and it was a small rust pin hole in the base of the cylinder. That was caused by corrosion in the cylinder itself. And it was, it was a steel cylinder. And that was the only, I, I, I was incorrect to say I haven't had trouble with a steel cylinder, because that was.

MR BOYLE

Right. So, so you've had the steel cylinder incident, plus you've had at least three instances of, with that, with alloy cylinders - - -

A Yeah.

MR BOYLE

- - - with split, splits in the neck - - -

A Split necks.

MR BOYLE

And you've had one experience with, with an aluminium cylinder with a leaking Kitty head - - -

A That's correct.

MR BOYLE

- - - valve? All right. Thanks.

DETECTIVE SENIOR CONSTABLE GRAY

Q148 O.K. Perhaps we could move on to the various life rafts that you've got here, Jim?

A Yeah.

Q149 Unless there's anything else you can think of as far as what we've just sort of discussed.

A This poor tired looking thing is a, an R.F.D. Petrel. It's, it's not particularly old, it's 12 years old. It's badly copperised and it has fabric deterioration mainly due to the thing being wet. I have in fact decided to condemn this raft. It's, it's, it's, the inflation tubes themselves are affected and it's, it's beyond aid, I - - -

Q150 Right.

A I won't pass this. The owner can buy a new one.

Q151 Right. O.K. Now some of the things that you've got in this raft - - -

A Yes.

Q152 This is your sort of stock/standard equipment in a raft these days, of this type?

A Yes.

Q153 O.K. What, have you got packs that go in them at all?

A Yes.

Q154 Do you have a - - -

A This one's ..... here, I've only just opened it. This was a, a fairly conscientious fisherman, he has an E.P.I.R.B. in his life raft, which is always a good idea.

Q155 Does that go in the pack, does it - - -

A Yes, it goes - - -

Q155 - - - ordinarily? O.K.

A - - - in the packs. A coastal first aid kit, torch and spare batteries and a spare globe. Flares, this is a coastal pack. It has two red hand flares and one orange smoke flare only. And, well they can go in his new life raft ..... Sponges and a bailer of sorts.

Q156 Is that a standard bailer that comes with the kit or - - -

A Well every life raft has a, a, a bailer or, or a container of this size, size, for bailing water out.

Q157 Right.

A And the compressed sponges are for mopping up.

Q158 Right.

A You have a pealess whistle, leak stoppers, sea sickness tablets incidentally.

Q159 Right.

A Yes, leak stoppers. If the raft's damaged - - -

Q160 Yes.

A - - - and there's a hole in it, you can push that into the hole and twist it and hold air into it until such times as you can effect some sort of repair, more permanent repair. A small cup for doling out water, rationing it, a pealess whistle, zyalum(s.l.) lights.

Q161 Yeah.

A They're out of date so, I'll give you a quick demo. That's out of date to the point it doesn't even want to - - -

Q162 Work.

A - - - ignite. A fishing kit and spare hooks. The bellows for pumping up, topping up the raft if the raft is under inflated for whatever reason. And it also doubles as a bilge pump. Some of them do anyway.

Q163 Mmm.

A Plastic bags. .....

Q164 You right?

A Sea sick bags. A box of windfree matches.

Q165 Yeah.

A More zyalum(s.l.) lights. Water.

Q166 Oh, O.K.

A 100 mls, your ration for the day. A signalling mirror. Barley sugar rations. Not available any more - - -

Q167 Right.

A - - - the - - -

Q168 Make you thirsty.

A - - - the last you'll see of barley sugar. It's all these new biscuit type ones. Board of Trade signalling card, instructions on the use of the life raft. And I think I've got it.

Q169 O.K.

A This pack will differ from an A.Y.F. pack - - -

Q170 Right.

A - - - in that there's twice as much water in it.

Q171 Right.

A But the A.Y.F. life raft has a lot more flares.

Q172 Right.

A They have eight flares where this one only has three.

Q173 Three.

A And there's the usual ancillary equipment that's common in all life rafts. Rescue quoits and a line, a paddle, a pair of paddles, and a knife to cut the painter line free if you - - -

Q174 Right.

A - - - if you need to.

Q175 O.K. now, from you experience, are these a good raft?

A Yes.

Q176 Now - - -

A They're, they've, well they've been around since the Petrels in various forms have been around since the 1960's.

Q177 O.K.

A And they've rescued many a person.

Q178 O.K. Now you've got a raft over here, an orange raft here, which you mentioned prior to the interview in relation to the 1979 Fast Net Race?

A Yes.

Q179 Could you tell us, expand on what you sort of told us before, so far as that life raft's concerned?

A Well there's, the life raft itself's upside down here.

Q180 Right.

A You're looking at the underside of it. And it's devoid of water pockets. (Tape Beeping)

Q181 You right?

A Yeah.

Q182 I just couldn't hear you over there, that's all. (Tape Beeping)

A Yeah. It's absolutely - (Tape Beeping) - devoid of water pockets.

Q183 O.K? So what are water pockets?

A These ..... they're, they're large, they're lead loaded and they fill instantly.

Q184 And these act as - - -

A They act as stabilisers.

Q185 Right.

A To prevent the raft or, or to reduce the risk of the raft blowing over.

Q186 Right. O.K. And they're certainly absent from that raft there, which was - - -

A Well there's none at all.

Q187 None at all.

A You can see there, there's just nothing.

Q188 O.K.

A Some of them, I've got a, a damaged Zodiac here. While this has water pockets and they're relatively large, they're not, they're not lead loaded and the raft itself is vacuum packed. So it sits in a vacuum bag all squashed up. When you fire the thing, somehow or another it's got to get water in it to, and it, it's, there's a period of time before that happens - - -

Q189 Right.

A - - - when the raft is always in danger of blowing over.

Q190 Mmm. O.K. Any further questions?

MR BOYLE

Jim, just what, what is, why do you think that R.F.D. market light weight rafts such as the Prosaver? What do, where is the market for that type of raft?

A Two, two things, two things, the cost and the light weight. The light weight is to attract the, the racing yachtsman who's always interested in saving weight, and they seem to be always interested in saving money. They'll spend $10,000.00 on a new Kevlar main, but they, they'll baulk at 800, 8, $900.00 extra for a decent life raft.

MR BOYLE

Mmm. Right.

A They perceive that safety equipment is, they'll never use it, so the least they can spend on it, the better.

MR BOYLE

So if, did the six person R.F.D. Pacific raft and the Prosaver six person, they're about approximately the same price, aren't they?

A Approximately the same price, yes.

MR BOYLE

Yes, so in your experience it, would a keen racing yacht skipper tend to want to go for the lighter weight or the heavier weight?

A The lighter weight. Basically because he can stow them below and get his weights low in the yacht. I suppose one could argue that, the validity of stowin' them

below, frankly I think they should be on deck in a hard canister where they, they're needed and, and useable.

MR BOYLE

And what is your opinion as, sorry, what's your opinion as to the likely long, longevity of a lightweight raft versus a, a more robust, or sort of heavier material type raft?

A In service in the water?

MR BOYLE

Yeah, in, in service with, fully loaded in reasonable, or moderate seas?

A Generally I think that they're not as durable. They're, the shape of them, the fact of the, they're, they're a square life raft, the corners are not engineered. They're just the tube bend round the corner. And the floor is the brace that holds the whole life raft in shape. If the floor is gone, the life raft has nothing to hold it and it'd just flap around.

MR BOYLE

Yeah.

A Now, unlike this one, for example. This one is round. And there are no stresses on the floor in any one direction.

MR BOYLE

And from your experience, the difference between a welded seal, or a welded connections, within a, a life

raft and a glued seal, is there any advantages or disadvantages associated with each type?

A I don't think so. Not, not, the, the Prosavers are all glued construction because the fabric is far too light to, to weld. But this one, this life raft here for example, is, is welded construction and they're very durable.

MR BOYLE

What about this one?

A This one is hand, is glued, hand glued.

MR BOYLE

All right.

A And it is durable - - -

MR BOYLE

Mmm.

A - - - so there's - - -

MR BOYLE

No real difference?

A - - - no real difference.

MR BOYLE

Thank you.

DETECTIVE SENIOR CONSTABLE GRAY

Q191 So far as you were talking about the, the floor on this round life raft, if there was a tear in the base or in the floor of this raft, how would that affect the integrity of a round life raft?

A I, I, I don't know think it'd affect it at all, because the, the inflated raft, the more pressure there is in it the more it wants to hold its shape.

Q192 Right.

A The more pressure you put into a square one - - -

Q193 Yes.

A - - - with non-engineered ..... just rounded off - - -

Q194 Tubes.

A - - - tubes - - -

Q195 Yeah.

A - - - the more pressure you put in it the more it wants to straighten out.

Q196 O.K. So certainly putting a, a, cut in a square - - -

INTERVIEW SUSPENDED

INTERVIEW RESUMED

DETECTIVE SENIOR CONSTABLE GRAY

Q197 Interview between Detective Senior Constable Gray and Mr Hooper recommenced. The time is 4.17pm. Just prior to the tape finishing, Mr Hooper, we were discussing the round base on this particular life raft here so far as its integrity if a, a cut was made in the base. Could you - - -

A Yes.

Q197 - - - comment on that?

A By, the fact that's it's round, there are no loads on the floor in any one direction.

Q198 Right.

A So while your, your bum might get wet - - -

Q199 Yes.

A - - - from water coming in, that split may or may not progress. But the life raft will still hold its, its shape - - -

Q200 Right.

A - - - and general function. The, the square life raft by contrast - - -

Q201 Yeah.

A - - - it's like, like a box - - -

Q202 Yeah.

A If you have a box with a bottom in it, it has some integrity. You put a, a slash in the bottom and it'll rack around until the bottom falls apart.

Q203 Right. O.K.

A Mmm.

Q204 O.K. David?

SENIOR CONSTABLE UPSTON

Q205 Now just, while we were changing the tapes, we got you to now explain the, what a Valice style life raft is and how that's generally stowed.

A Yeah.

Q206 And for what reasons.

A Generally, racing yachtsmen like them because they're lighter and they can stow them below decks which, in my opinion's not a good thing to do ever. They are, they're held together with Velcro and, as you can see, there's the raft, there's the cylinder, there's the operating head, and here's the live business. There's

your painter in its elastic loops. There is the other end of the life raft tied solidly onto the raft itself. And there it is looped through the, the Walter Kitty head. Now you're probably aware of the situation in Business Post Naiad, that they had one of the Valice life rafts go off as they were pushing it up through the companionway. That was most likely caused by this loose end, and the conditions they had in the boat, if that Velcro came undone and that end hang, hung out, and someone trod on it, bang, they - - -

Q207 Right.

A - - - ..... pulled it off immediately. And that's most likely what happened to them.

Q208 O.K.

A O.K.

MR BOYLE

Just, in your opinion, Jim, if, if, if you had a, a life raft in a soft Valice below decks, in a wet environment, there was water below decks - - -

A Mmm.

- - - how much extra weight of water do you think would actually be - - -

A Well - - -

MR BOYLE

- - - contained in something like that?

A Well there's 10, there's 10 pound in a gallon of water. How many gallons would fit in there? It would probably increase its weight 20 kilos. So in the case of

Business Post Naiad, the life rafts here, I weighed on the scales and they were 38 kilos, suddenly they were, they were 50 or more. And also the crew of Business Post Naiad at the time, they were, they were tryin' to deal with their life rafts, they wouldn't have been at their physical best.

MR BOYLE

Yes.

A So any effort at all would have been very hard for them.

MR BOYLE

Yeah. Yeah.

SENIOR CONSTABLE UPSTON

Q209 Now earlier on you stated that you didn't, you didn't believe that stowing a life raft below decks on the yacht was a good idea.

A That's right.

Q210 Would you like to elaborate on that, please?

A A, a friend - - -

Q211 .....

A - - - of, a friend of mine was telling me yesterday that the boat he sails on, a local racing yacht, he, lightweight Valice life rafts are packed right up by the transom at the bottom of the quarter berths. So you have to crawl 3 metres up a tunnel to the base of the quarter berth to get the life rafts. And he put 'em there to get 'em out of the road. You know, just no sense at all.

Q212 Yeah.

A It doesn't make rhyme or reason. Another bloke I know, he puts, instead of having a permanent stowage position for his life rafts, he stacks 'em up on the windward side along with his sail bags and anything else, so that he gets some sort of leverage against the wind pressure to keep his yacht sailing upright. Now where were those life rafts again?

Q213 Yeah.

A You know, the, they're crazy.

Q214 Mmm.

A They, they only have these lightweight soft Valice life rafts to gain a competitive advantage over their competitors.

Q215 Right.

A That's really what it's all about.

Q216 Just getting back to stowage positions, what about in the case of where the raft is stowed in a rigid container on, on deck somewhere - - -

A Mmm.

Q217 Are you, have you had reported to you any incidences from the Tasmanian yachting fraternity of where a life raft has been washed off the deck by big seas?

A Yes. And all bar one of those, they're, particularly with fishing boats, they tie them down with redundant pop rope.

Q218 Right. So they're, they're using old - - -

A Yeah.

Q218 - - - old rope?

A Old pop ropes and things like that.

Q219 That's on the fishing vessels?

A On the fishing vessels, yeah.

Q220 What about on the yachts?

A The only, what they should use is a webbing strap. But I have known a webbing strap to be affected by the sun and actually came, just came adrift and the life raft fell overboard. So, maintenance.

Q221 Right. So on how many instances could you sort of recall occurring say in the last 5 years?

A Two.

Q222 Both on yachts?

A One on a fishing boat and one on a tug boat, a commercial tug boat. The commercial tug boat was because the sun had attacked the webbing. The fishing boat because it was redundant pop rope tired, old, sun ravaged and it just went over the side and it inflated his raft.

Q223 In your professional opinion, so far as the Sydney to Hobart Yacht Race is concerned, it's a ocean going race, what type of life raft should be on those boats?

A A life raft that's properly approved and tested by marine authorities. When I say, marine authorities, under that's, the U.S.L. code, that they themselves have supervised or are satisfied that the testing procedures are done.

Q224 Right.

A Unfortunately the market seems to be driven by cost at the moment and you're getting cheaper and cheaper life rafts coming out where the, the cost of production overweighs their strength and durability and, well they're, some of them I wouldn't like to get into.

Q225 Right.

A Um - - -

Q226 Once again, in your professional opinion, do you believe that the introduction of the 30 days survivability of the life raft in use in a seaway, as is the case for coastal standard life rafts and for solar standard life rafts, would make for a safer survival craft for yachtsmen?

A Very definitely.

DETECTIVE SENIOR CONSTABLE GRAY

Q227 O.K. Is, does anybody else like to ask a question? O.K. The time on my watch now is 4.26pm. This interview is now concluded.

INTERVIEW CONCLUDED