



Oral History Interview Transcript

Interview Control Number: 9-C18

Interviewee: Ken Farquharson

Interviewer: Roger Chiasson

Date of Interview: 23 February 2009

Location of Interview: Halifax, Nova Scotia

Transcribed by: Sue Easterman

Tape 1, Side 1

INTERVIEWER: The subject of this interview is the HMCS PROVIDER project. The PROVIDER was designed and built in Davie Shipbuilding Limited or DSL during the early 1960's. It marked the Canadian Navy's adoption of the fleet replenishment concept whereby fuel, ammunition and stores were carried in a separate vessel in order to extend the fleet's endurance away from home port and reduce its dependence on foreign port replenishment. The concept essentially emulated the practise which was already established in The Royal Navy and the US Navy. Mr. Farquharson, a retired Navy Commander, (Canadian Navy Commander) was a Commissioning Engineer on PROVIDER and stood by her construction in DSL as a member of the staff of the Principal Naval Overseer or PNO in Lauzon, Quebec which was co-located with Davie Shipyard. The purpose of this interview is to capture Mr. Farquharson's knowledge and perspective of this major pioneering project in the history of Canadian naval procurement. So first I will ask Mr. Farquharson to introduce himself and to provide us with a brief biography of his career. Mr. Farquharson ...

FARQUHARSON: Yes, Roger, my name is Ken Farquharson. I first joined the Navy during World War II with the Engine Room Artificer Apprenticeship Program and went to sea as a Stoker Second Class, progressed up the ranks to Petty Officer when the war finished. I left the service at the end of the war and moved to Toronto and then got into a routine job which was soul destroying so I left it and decided to go back to university. I went back to university in Halifax, because my wife was from there, and graduated from Dal, (Dalhousie University), and Nova Scotia Technical College. From there I joined the Navy again, as an Acting Sub Lieutenant, and by virtue of the seniority I had achieved during the War, I suddenly found myself as an Acting Lieutenant, with a major increase in pay from my college days. From there I did a short course in the dockyard to familiarize myself with different shops. Then I proceeded to the Royal Naval Engineering College in Plymouth and spent the year there and did a Damage Control Course in Portsmouth, etc. and came back to join the HMCS MAGNIFICENT, aircraft carrier.

After that period of time I was appointed to the Halifax Shipyards on the staff of the Principal Naval Overseer as the standby engineer officer for HMCS MARGAREE. MARGAREE, when commissioned, sailed to the West Coast and I operated out there for the next two to three years. After a headquarters appointment and being appointed to Lauzon [Quebec], I spent the next two to three years while PROVIDER was being built. Following that I took PROVIDER to sea as the Engineer Officer and was in the ship for another two to three years. Following that I was appointed to the Dockyard as the Staff Officer for Contracts and from there ... let's see now. From the Dockyard I went to Ottawa as the Staff Officer Auxiliary Machinery in Ottawa and from that job, which was about two to three years, I was appointed to the PNO staff in Lauzon for standing by PROVIDER as the Standby Engineering Officer.

When the PROVIDER appointment was finished I was appointed to the Dockyard as the Contracts Officer and from that job I was appointed to Ottawa again for the Staff Officer Auxiliary Machinery in the Engineering Department of Ottawa. From that job I learned I was to go to London, England as the Engineering Officer on the staff of CDLS London and from that job, I retired to come to Halifax again and I became the Naval Project Manager for the conversion of the Dockyard. By this time I was a civilian. From that job, after 5

years, all the planning was completed I moved to the Department of Development for the Nova Scotia government and was a senior manager of the offshore development. And from there I moved to become the Program Manager for the construction of the icebreaker Anne Harvey at the Halifax Shipyards. It was from this job that I retired.

INTERVIEWER: Well thank you, Mr. Farquharson, for that excellent lead into our interview. I'd now like to focus on the period that you spent in Lauzon, Quebec overseeing and standing by PROVIDER. So first of all I wonder if you could provide us with an overview of the PNO Lauzon organization and its role in the PROVIDER Project and obviously focus on your specific role.

FARQUHARSON: Yes, the staff of PNO when I arrived there was; we had a Constructor Commander who was PNO. His Deputy was a Lieutenant Commander Engineering and on staff was a Constructor Lieutenant and miscellaneous Petty Officers and Chiefs. When I arrived after sometime when the ship was due for commissioning I absorbed the Constructor Lieutenant and Chiefs and Petty Officers into my staff and we, of course, supplemented that with other appointments etc. I later was allocated a Commissioned Officer Engineering to look after the cargo pumps, etc.

INTERVIEWER: Okay, that's very good. We have a good idea of the PNO Lauzon organization at the time. I'd now like to move to Davie Shipbuilding or DSL. I'd like you to talk about your experience on arrival and tell us about what Davie's capabilities were, their senior management structure, etc.

FARQUHARSON: The yard consisted mainly of the General Manager which was Mr. Veliotis and he had a deputy who did the dog work and on his staff he had superintendents for the hull and engineering and outfitting. And these people stayed with the ship for the whole period of construction. The construction of that vessel was something new because nothing had been done to approach the design that they were being asked to carry out. And it was further compounded by the fact that a lot of the specifications for the ship was [to] naval specification but the ship was being built to Lloyd's standards and this could cause some confusion later on.

INTERVIEWER: That is very interesting, Mr. Farquharson. I recall in the Protecteur/Preserver Project that we had similar issues between naval standards and classification society standards. So could you expand a little bit on what that conflict was.

FARQUHARSON: It boiled down to trying to rationalize between naval specifications and the Lloyd's standards, etc. As one example, the prime mover pumps which were to drive the upper deck winches, etc. were ... it was intended by the yard to just nail them down to the deck which was the top of the tanks. Subsequently, Lloyd's stepped in and said you can't do that, there has got to be a separation. So they had to build a false deck between decks to mount the pumps. It was that sort of thing that happened. And the other problem, of course, was painting, where the Navy had specified a naval painting system the yard were content to try and get by with what they are used to for commercial standards. And it obviously was going to cause problems subsequently when we went to sea and tried to maintain the upper deck.

INTERVIEWER: At this point, Mr. Farquharson, I'd like to just walk back a little bit and ask you to talk about the period under Takis Veliotis of Davie Shipbuilding. He is well known as

a flamboyant and very interesting character and I think it would be valuable for the record if you could provide us with your knowledge and your experience with Mr. Veliotis.

FARQUHARSON: Mr. Veliotis was a unique character. He was dynamic. You wouldn't dare stand in his way or you were in trouble. And I found that the only way I could get to him was to stand up to him and just threaten to halt work on the ship unless his supervisors carried out the specifications which were part of the contract. Mr. Veliotis appreciated someone who would stand up to him because that was his nature. If you didn't you were not worth worrying about as far as he was concerned. So he and I developed a respect for one another over the period of time I was there and that respect carried on subsequently.

INTERVIEWER: Well, it is interesting, Mr. Farquharson, that you now mention a couple of instances where there was quite a bit of conflict between PNO and the shipyard. I would just like your perspective on what was at the root of that. Was it, in fact, that the shipyard had perhaps gotten over their heads or what do you think was at the root of it?

FARQUHARSON: I don't think that the shipyard got over its head, there was just a lack of familiarity with the subject - no one had built that class of ship in Canada before and, of course, it was an experimental project in a sense because they were trying things for the first time and a quick example would be on the upper deck winches which were hydraulically controlled but the winch driver's control were levers hooked up to the winch by a bound and cable drive. A bound and cable drive was a series of ball bearings inside a sheathing and the problem was that in damp weather the dampness would get inside the cable and freeze it up so that the winch driver would have to push doubly hard on his control and then suddenly it would take off and then the winch would take off and that meant that the cable would come off in a birdcage fashion. And that could cause no end of trouble ... that the control ... the hose going to the receiving ship.

INTERVIEWER: So I think that what you are telling us is that the Navy perhaps had specified a general requirement rather than specifying a particular standard that had to be met. The shipyard was working somewhat in the dark in its design?

FARQUHARSON: Well, the Navy, I think, walked into it blindly as well, because they didn't know what they wanted to achieve the results. And so large areas of specification were left doubtful and gray and the shipyard were meant to fill in those spots and as the shipyard had never done that kind of a job before, they ran into trouble as well. And it wasn't, at that point, [not] a matter of dollars so much as knowledge.

INTERVIEWER: Very interesting so far, Mr. Farquharson. I'd like you to quote other examples of where perhaps Naval requirements, as uncertain as they were, and the Davie design didn't quite match up. Both during the construction phase and obviously as the Commissioning Engineer what you might have discovered subsequent to commissioning that may have been rooted in this disparity between what Davie Shipbuilding thought they should provide and what the Navy thought they were buying.

FARQUHARSON: Well, I think, one of the problems was that the Navy didn't know what to expect and since the yard were building this one-off type of ship and with no background experience, it got into difficulties with respect to the equipment. One example would be all the pumps and the motors were hydraulically driven and they were bought from a company in the UK ... the winch motors and the prime mover motors. The company was in Newcastle-on-Tyne, Clarke Chapman. They, at that time, were overloaded with work and

they farmed some of their work out to a smaller company. That gave us no end of trouble, because when we started using the equipment, we would just start up a winch and it would jam and we couldn't figure this one out and that is where the yard's problem came in too, because to get at it to inspect it you had to open up the pump or the motor and there was no means of running down the hydraulic oil. They had made no provision for that at all. So it ended up being a lot of hydraulic oil on the deck and this caused no end of trouble. It was found out later that when they subcontracted some of the work they subcontracted half a pump casing to somebody. And when they put it all together that half didn't match up with the casing that they had. So the pumps would just jam when they started up. And it was the most blatant error that I can think of.

INTERVIEWER: Do you recall how that particular problem was resolved?

FARQUHARSON: Yeah, I do. We went over to ... after we commissioned we went over to the UK and they took everything back ... all the pumps, etc. and re-machined them.

INTERVIEWER: And was that at Davie Shipbuilding's expense or the Canadian Navy's expense?

FARQUHARSON: I have no idea. I have no idea.

INTERVIEWER: Interesting.

FARQUHARSON: I wasn't worried about that.

INTERVIEWER: That is very interesting. How about post commissioning problems that you might have encountered?

FARQUHARSON: One of the first ones we encountered was when the ship went from Lauzon to Halifax after we commissioned. It was cold weather and we were in Halifax one night and it was freezing temperature. All of the piping that came over the open upper deck froze up and split all the major piping. It would bulge around the support fans, etc. and we had to replace all those pipes and the only thing I could do to make it a better system was to run a little chaser steam line along the lines and run it from the motor that was used for the Butterworth System for tank cleaning. That seemed to solve that one.

INTERVIEWER: And that became the permanent solution did it?

FARQUHARSON: Yeah, it did. Yeah, I just ran a 3/8" strip.

INTERVIEWER: I'd now like to turn our attention to the inter-relationships amongst the various parties involved in the PROVIDER project. There was PNO, of course, there was Davie Shipbuilding, there was the Department of Supply and Services, who we now know as PWGSC, and obviously Naval Headquarters. I wonder if you could tell us about those inter-relationships and some of the challenges and successes that came out of those relationships.

FARQUHARSON: The headquarters input was minimal because nobody knew anything [about] tanker supply vessels. Davie, I think, were putting their best efforts into making the thing an economical success as far as they were concerned so they would cut the odd corner, etc., etc. with respect to painting or something of that sort. PNO staff when I got there was pretty lackadaisical and they never went near the ship when it was building. When I arrived they figured, well, we have somebody now, we can use that person and that's the way it went. DSS, they were doing the DSS job of trying to make the thing as

economical as possible and that, of course, clashed with the shipyard's concept. They were trying to make a profit out of it and I think eventually they did. So the relationship was disjointed between everybody. DSS were being very dogmatic in what they were saying and they were the ones who carried the switch and so if there was any discussion about some problem they would come down hard on the money side and that is the problem we found with them.

INTERVIEWER: At the risk of putting words in your mouth, would you say that technically the PNO and the shipyard got along. Now you had mentioned a few instances where there was some discrepancies but they were eventually addressed. But as a general statement PNO and Davie Shipbuilding got along but DSS who were the contractual people that muddied the waters somewhat. Would that be a fair statement?

FARQUHARSON: Yeah, that's the case. Actually from the Navy's point of view we got along fine with the yard after we established the ground rules and the DSS were always in conflict, always in conflict, and, for example, they ... just before we commissioned, it was wintertime and we ran out of diesel fuel and there was some hang-up ... Davie were trying to push a claim for something or other ... I forget what it was now ... with DSS and DSS were refusing to pay it. And so Takis said, "Okay, you are not getting anymore diesel out of me".

INTERVIEWER: So that was their only means of fighting.

FARQUHARSON: ... only means of doing it. But then we came into the picture. I went down to see him and said "Come on Takis you are going to freeze my sailors all to Hell. And your fight is not with our sailors; your fight is with DSS. Now sort it out some other way." And he said, "No, we are just going to hang fire". I said, "If you do I am going to get an oil truck and I am going to bring it into the yard here." He said, "I'll have the barrier put up." I said, "I'll crash the barrier, if I have to. I am not going to let my sailors freeze to death."

INTERVIEWER: That is a very good story that typifies the days of Takis Veliotis. Perhaps at the defence of DSS, one of their more difficult jobs in any project is to handle 'arisings' that is those discrepancies between what we thought was in the contract and what eventually had to be done. So can I assume that there would have been a lot of 'arisings' and that perhaps negotiating those 'arisings' might have been a thorn in the side of both Davie Shipbuilding and DSS?

FARQUHARSON: I think so. And you know it only happened from time to time. It was continuously. It only happened from time to time. But when it did, DSS, since they issued the contract, they had all the power. We were sort of observers on the side to try to get the job finished and I don't know if I mentioned the fact that this guy from DSS came down to lower the boom one time.

INTERVIEWER: Nope, please go ahead.

FARQUHARSON: Well, I forgot the man's name now, but he had just joined DSS and the ship was nearing completion and he came down and was going to swat Takis over the head about this particular thing. And Takis sort of dug in and said, "Not bloody likely". So he said "Mr. Veliotis", (and this was the meeting that I was at), "Mr. Veliotis, if you insist on pushing this" he said, "I am going to have this ship removed from your yard" and then

Takis said “no you won’t I’ll take the throttle with wheels off” and he said “well we will get wrenches on them”. “I tell you what” he said “if you insist on doing this I am going to call every French Canadian newspaper and we’ll see when I tell them that you are, and he mentioned his name, you are anti-French Canadian for shipyards”. He said “how long do you think you are going to last in that job?”

INTERVIEWER: Well, that is not a typical line in contractual negotiations I must say.

FARQUHARSON: Oh no it isn’t and it is not something you want to publish generally, but that was sort of the hard line that was drawn. And the ship’s company and the PNO staff were on the sideline. We couldn’t do a bloody thing about it. And we just had to wait for the outcome. That was the problem.

INTERVIEWER: Obviously a source of frustration for DND and the sailors in particular....

FARQUHARSON: Of course.

INTERVIEWER: ... are doers and just want to get on with the job.

FARQUHARSON: As I say, too. My sailors [were] at that time had moved on board the ship, just before commissioning, and they were freezing to death.

INTERVIEWER: I’d like to walk back a little bit, Mr. Farquharson, and ask you about a part of the contract which is usually quite difficult and that [is] being the tests and trials. Could you tell me how this was handled in the PROVIDER contract and some of the challenges that you faced?

FARQUHARSON: It would normally be a question of trials taking place under the jurisdiction of the yard because they still owned the ship and they would have a chief engineer on board and an operating crew to steam the ship. In this case, we were using a couple of different systems. One was the isolated machinery control room concept which nobody had ever seen before and secondly the other thing that was unique to this ship was the Boiler Control System. For the first time the Navy were using a Hagen Control System because that’s the one the yard elected to put in and none of our sailors knew anything about Hagan control. So I undertook to get my people trained up in that, but this time much of the senior chiefs and POs were on board and I arranged to take the whole works down to the Philadelphia Naval Turbine and Boiler Laboratory in Philadelphia and train them in the Hagen system. They had one set up on an actual boiler etc. Then I took them to an American ship that was using the Hagen system and we sailed for a week or so, on the USS TRUCKEE, an oiler for the American Navy. And for the Machinery Control Room concept I took my whole crew over to the Mediterranean with the assistance of the Royal Navy and we operated on the cruiser [HMS] BLAKE which was fitted with a Machinery Control Room concept. And we would be on the ship for a major part of the day and then the Captain would call down to the Engine Room where I was located and say okay it’s all yours Chief. Do what you want. So we got trained up that way in the Machinery Control Room concept. The TRUCKEE when we arrived there we found that the system was not in use at all, that they couldn’t make it operate. And my guys, fresh from the course in Philadelphia, asked if it would be okay if they tried to fix it. So I consulted with the Engineer Officer of the ship and he said go ahead do what you have to do, you know, our guys haven’t been able to use it for over a year. So my guys traced the system and they found that the problem was one of a pulsing system and it didn’t get a chance to dampen

itself out. It was like sawing table legs. So they got a tomato juice can from the galley and sweated a couple of nipples on, sent it back into the system and it acted as a buffer or damper and the system worked perfectly. The Engineer Officer was as happy as Hell, but his crew weren't really very pleased because they had been telling him for years that the system didn't work.

INTERVIEWER: That was a fascinating story!

FARQUHARSON: With regard to the test and trials as I said normally the shipyard would provide the trials team and the operators for the blowers, etc. In this case, there was no one around that had the familiarity with the systems we were using, no one. They couldn't find anybody, so I offered my crew because they had had been trained up now in both concepts and the yard very gratefully accepted that. Now I had to put them under the jurisdiction of their Trials Engineer because it was still their ship, but I was in the background all the time. And that worked beautifully. The only thing that came out of this was that after the ship commissioned many months later I was called to a meeting in Ottawa and the meeting was between Veliotis and DSS and myself; and DSS was being charged for a lot of extra stuff and Takis was defending himself and he said you know we had the engineering crew were in the way all the time. And I said "what do you mean they were in the way? My guys were operating the system". But he wouldn't admit to that.

INTERVIEWER: Now I would like to focus on the major successes and achievements in your opinion that occurred on the PROVIDER Project.

FARQUHARSON: There were a lot of successes. Some of them took time to solve. But one of the problems, initially, was the probe and drogue system for fuelling. One of the problems, as I have said, was the probe and drogue system which the Americans invented but had never used. And, of course, they had their ships with an open front fuelling system on the deck, etc. for most of the destroyers so they wouldn't have any real cause to push it. But when we got it, it was found that I wanted to trial it out and to make sure it would work when we got to sea. So I had a barge put along side the jetty, along one side of the jetty and the ship on the other and we ran a high line across and then started moving the probe and drogue, moving the probe anyway, to see how it would lock into the drogue. We found if it was slightly misaligned it wouldn't seat. So all we had to do was to readjust the positioning of the probe relative to the drogue and it worked a treat. So that was one problem.

Another problem that we had was the winches which were running wild with the system that was fitted. When they would run wild they would birdcage and the problem was unwinding that heavy cable off a winch [which] was a big one. So we had the dockyard engineers look at it and one of the dockyard engineers came up with a spooling system which he designed and once we fitted that those winches worked well from the birdcaging point of view. So that problem was solved.

Another problem was the water lines that ran over the deck, the tank top deck. They had no protection from weather and so, on the way down from Lauzon to Halifax after we commissioned, all the major pipes froze up and bulged and split, etc. so all the piping had to be repaired, replaced and the solution we came up with was to run a small steam tracer line under the lagging of all these pipes so they wouldn't freeze up in the winter time.

INTERVIEWER: Are there any other successes and achievements that you like to highlight?

FARQUHARSON: Yeah, I think so. When we commissioned there were numerous small things that had to be sorted out and we were anxious to get the ship operational and get them joining the fleet. And there was some problem with these little jobs that needed doing. So at the meeting where we were discussing these things, we had something like 230 items to discuss, and [on] the first one discussed we took about an hour to discuss it. And it was obvious that the meeting was not going anywhere. DSS were being obstreperous and the yard [representatives] were being obstinate and this at first went on for little over an hour and we hadn't concluded one item in the 240 odd. And so eventually, Takis said to the meeting, (and we had all the Headquarters reps there and everybody else), Takis said "Would you gentlemen mind excusing the Engineer Officer and myself for half an hour while we try to come to some conclusions?" We went through the whole list in an hour. The whole list, he would take some and I would take some for the ship. But the problem was when we got down to Halifax we still had these numerous things and by this time Headquarters was getting a little cheesed off. The ship was becoming a real *bête noire* and I remember my first quarterly letter, the Engineer Officer's Quarterly Letter, I wrote 'this ship is a sleeping tiger'. Those were the words I used. And it turned out to be a sleeping tiger. Once we got the problems sorted out. And the problem [was] I guess basically unfamiliarity on everybody's part – the yard, ourselves and the overseeing staff was flogging ourselves along trying to do the best we could, but being caught between these opposing forces. And it was only when we got the ship to sea and started driving it that we found that we could, you know, in less than two minutes we could hook up to a destroyer and fuel them. And so the sleeping tiger concept was not wrong. Everybody was giving me a hard time over this expression.

INTERVIEWER: Again at the risk of putting words in your mouth I think the conclusion I draw from this is that in spite of all the problems associated with unfamiliarity with a shipyard that wasn't quite 'au fait' with some of the more modern technologies, perhaps with the specification that was perhaps a bit vague, that we ended up getting a good ship that did yeoman service for the Navy for a few decades.

FARQUHARSON: Absolutely. And boy you couldn't have expressed it better. That ship, when she decommissioned here, I got a surprise call from the Engineer Officer, a young guy by the name of Osborne. He said to me "You were the first engineer weren't you?" and I said "yeah" and he said "we are going to sail up around the basin for a decommissioning trip and take the families on board and I'd love to have you come on board". So I was thrilled. I was thrilled. And so I said "boy I'll be there with bells on". So I joined the ship and came down and we went up around the basin and we were coming back towards the jetty where it was going to be sitting and on the way in I had a call over the system saying "would Commander Farquharson report to the MCR". Oh no. So I went down and this young engineer said "look you were the one that started this ship up in the first place". "Yes I was, my crew and I". He says "I'd like you to help us shut down". And I was singularly thrilled because how many engineers get a chance to commission a ship and decommission a ship. Not very many.

INTERVIEWER: You are right and that must have been a special honour.

FARQUHARSON: It really was a special honour.

INTERVIEWER: Well, Mr. Farquharson, I'd like to end on that very happy note. But I've got one more question for you and that is, could you reflect on the lessons learned if any that the Navy got from the PROVIDER experience?

FARQUHARSON: Yes, generally speaking, it was a learning curve. And what I learned was that if we built anymore ships of that sort we had to recognize the fact that we didn't know much about them in the early stages. And the shipyard didn't know much about them in the early stages ... didn't know anything about those ships. [And] For example, the first time I loaded the ship up at Imperial Oil I was really apprehensive because I didn't want to break the ship's back and so I searched around for help and I thought well maybe Headquarters has got a loading program that they can help me out with. My Cargo Officer and I had ... we designed a program of what we were going to do. But I wasn't certain first time off-it is a big responsibility. So I got a hold of Esso and said did you have any shore captains that know anything about loading tankers. They said, Yeah we have one down here on Barrington Street. So I made an appointment to see this man ... and he ... I went down to see him ... he was really good. He said what would you propose doing. And I said well here is the program we are proposing. And he looked at it and said nothing wrong with that. He said but if you are having any trouble give me a call. Well, you know PROVIDER's got a device on there for noting mid-ship's deflection, up or down, And when we are loaded I was getting an 8 inch deflection and I started to get worried. So I called this Captain Mason and said "I think I have a problem here. I've got an 8 inch deflection". "When you get to 8 feet let me know". So but in the meantime, I had written ... I had sent a message to Ottawa saying what is the loading program ... can you give me a loading program? And they said use your own discretion. Typical Headquarters answer. So we learned a lot. We learned that it was a unique thing and when we got a unique problem you try and find the unique answer. And it had to be done on the basis of individual effort in most cases, both mine and the upper deck people, etc. We had to find answers to problems. The shipyard didn't have the answers, Headquarters didn't have the answers and the crew didn't have the answers. And so we worked it out and then it became general ...and we got to a point within PROVIDER where we could ... from the time the first Coston and gunline went across to actually pumping ... two minutes.

INTERVIEWER: Well, Mr. Farquharson, thank you very much for a very interesting interview and your knowledge and experience and perspective on the PROVIDER Project. Again thank you very much on behalf of CANDIB.

End of Interview

End of Tape 1, Side 1

TRANSCRIPTION ENDS