



Oral History Interview Transcript

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Interviewee: Lt (E) (ret'd) J.L. Maw

Interviewer: Sid Jorna

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Transcribed by: Joy Thatcher

Side 1, Tape 1

INTERVIEWER: This is a CANDIB Oral History interview with Lt (E) (retired) John Maw that was recorded at his home on 14 October of 2009. The interview was conducted by Sid Jorna. We have both signed the copyright release form.

I would now ask John to identify himself,

MAW: Now? I am John L. Maw, RCNVR retired living in Saanichton, BC at the moment.

INTERVIEWER: This interview focuses on Lt. Maw's war time experience and later in civilian industry in various manufacturing plants and shipyards with naval equipment programs. Lt Maw served in HMCS Prince Robert as one of the engineering officers. The "Prince Robert" was one of three Prince Class ships which were armed merchant cruisers. According to Fraser McKee writing in *The RCN in Retrospect 1910 - 1968* edited by James A. Boutilier, The University of British Columbia Press 1982, Chapter 8, Princes Three, Canada's use of Armed merchant Cruisers during World War II pages 116 ff.

The "Prince Robert" was named after a CN Vice President and launched on the third of April 1930. The vessels were purchased for the RCN in January 1940. "Prince Robert" was converted to an AMC in July 1940 and McKee writes that "In five years of hostility only one of them was engaged in a battle as such, yet the three of them cost the Germans almost eighteen thousand tons of shipping."

INTERVIEWER: John, before we actually get into the details of the "Prince Robert" perhaps you can start by giving us a small thumbnail overview sketch of your professional career in the Navy and then later when you left the Navy and the kinds of things you did that might have had relevance to the industrial base.

MAW: Want me to start now? I graduated from McGill University in Metallurgical Engineering in May of 1941 and joined the Canadian Air Force in November with the intention, of course, of becoming a member of flight crew. When the Air Force found out I was a graduate engineer they made it very clear that they had no intention whatsoever of allowing me to fly. I didn't look forward to using a monkey wrench and a hammer repairing beaten up aircraft so at the first opportunity I transferred to the Navy in first of May or early May of 1942, was sent out to Royal Roads for training in the final course of Volunteer Officers' training, joined HMCS Prince Robert July of 1942, served in her as a watchkeeping officer until the end of 1944.

I was then taken on strength at Naval Headquarters in Ottawa from end of December 1944 until beginning of August 1945 when I was transferred to the Naval Dockyard at Esquimalt where I was on staff until November 1945 when I finally had my discharge. That completed my Naval activity.

I then entered into Professional Engineering activity first of all as a Mechanical Engineer with the Provincial government. Being a Montrealer, all my industrial contacts for employment were in the Montreal area and I didn't have any such out here on the West Coast so I had this opportunity to associate with the government, which gave me wonderful practical experience and also a knowledge of the whole province as my responsibilities related to government buildings and facilities throughout the province. By the end of 1949 I had been approached by the owner of a boiler manufacturing company in Vancouver who sought my facilities, or ability perhaps, to help him in his firm, which I did. It was always my intention to leave the government and this was an opportunity to make a change.

INTERVIEWER: Which firm was that?

MAW: The company was known as Blain Boiler Works, which was the name of the man who started the company just after World War I. I was taken on as sales manager, given a small percentage of the stock issued, and also an opportunity to purchase up to 30% of the shares of the company based on a value commensurate with my commencement of employment with the company. After a year and a half I realized that the owner who was getting on in years was getting restless and wanted to sell the company. I anticipated that this could perhaps be the end of my career with the company so I lined up a consortium of about 6 of the major customers of the company and I was able to exercise the 30 % stock issue that I had been issued and, which had appreciated handsomely in the year and a half that I had been with the company. So I was able to head up this consortium and ended up with 27% of the company myself for which I put up very few dollars, but it was the appreciation of my shares that enabled me to get that piece of the company.

INTERVIEWER: Did this particular company manufacture boilers.....

Maw: Manufacture boilers?

INTERVIEWER:that the Navy was interested in, like, did you have any Navy contracts?

MAW: No, no Navy activity at that time. We were general fabricators principally of smaller boilers and did a lot of process tower work for oil refineries and pulp mills. I was able to form a licensing agreement with John Inglis Company in Toronto who had a line of large water tube field-directed boilers. As a consequence I was able to extend the territorial activity of my company into Alberta and as far north as the Yukon.

At the time of the Korean War there was a concern that China might look with interest in moving into North America through the Aleutian Islands along the lines what the Japanese had in mind ten years earlier. As a consequence the Canadian government, through the Army, built a facility for troops and maintenance equipment of the Alaska Highway at Fort Nelson, which as I recall is about mile 491 on the highway and they were establishing a similar facility in Whitehorse, which is about mile 950 I believe from the southern terminus of the highway. Both these facilities were requiring water tube boilers, which I was able to obtain the contract much to the surprise and I'll say disgust, of large Eastern Canadian firms that thought they had B.C. wrapped up and the Yukon.

INTERVIEWER: So just to break in for a minute, this was ... did I get that right? ... that was in reaction to a fear of China?

MAW: That is what my understanding was and the facilities being put in at Fort Nelson and Whitehorse were Army bases whose responsibility also included maintenance of the Alaska highway, and I believe it was about this time that the highway was paved, but of course there was a lot of work in winter time keeping the highway clear of snow to enable trucking to maintain 12 months operation.

INTERVIEWER: You left this particular industry and moved on?

MAW: I should spend a moment or two on that, if it's all right?

INTERVIEWER: Yes, sure.

MAW: By 1956 I had built Blain Boiler Works into a company in which we had an annual volume of about a million dollars in sales, this doesn't sound a great deal in the year 2009, but a million dollars in 1956 was a considerable amount of money. I had acquired two associated companies in the steel industry, North West Steel Erectors and North West Steel Fabricators, which was in the structural steel business in

building small bridges and steel structures for buildings. Due to the rapid expansion of the company we required additional working capital and I interested one of the major businessmen in Vancouver to put up additional capital for us and he was made Chairman of the company. In a very short period of time it was obvious that he felt that he should have authority on day to day operations of the company, which I didn't agree with as I was President and General Manager. He had a great deal more prestige in industry than I did and as a consequence I resigned the company.

After a short time I joined Vancouver Iron & Engineering Works in Vancouver, which was associated with Combustion Engineering in the boiler business; Combustion being a division of Combustion Engineering of the U.S., one of the world leaders in power boilers. Vancouver Iron had been building water tube boilers for Canadian Naval vessels and merchant ships being built in B.C. during the war. This was a part that brought Vancouver Iron probably closest to the Navy at that time although they had been doing a lot of plate work relating to shipbuilding.

INTERVIEWER: Did they have anything to do with the Prince ships by any chance?

MAW: No, the principle activity in the refit of the Prince ships, both initially and later, was done in Burrard Dry Dock, North Vancouver and of course it was primarily mounting guns on them, removing decks of cabins, but there wasn't any work really of interest to..., there was some hull stiffening for the guns, but that was all done by Burrard Dry Dock.

INTERVIEWER: No, I was sort of thinking in the original Prince ships of course were built by the CNR on commission.

MAW: In England.

INTERVIEWER: Oh in England, so they were not built in Canada?

MAW: Not in Canada no, the Prince Robert was built by Cammell Laird, a British shipbuilding company in Newcastle upon Tyne and originally commissioned, I believe, in 1928, the other two ships approximately the same time perhaps built in other yards in England although they were identical ships.

INTERVIEWER: But we'll get back to the Prince ships in a few minutes.

MAW: Fine, so I'll carry on. My responsibility with Vancouver Iron Works was primarily sales and marketing. I quickly appreciated the fact that typical of a lot of Canadian companies the Canadian market wasn't sufficiently large to permit the large necessity of capital to expand and develop new lines of equipment, so I spent time developing and signing licensing contracts with U.S. companies principally to build equipment of their design for the Canadian market and other markets available to Vancouver Iron internationally where funding such as the Colombo Plan and Export Development Corporation allowed Vancouver Iron to enter competitively into some international markets. We did a fair amount of hydroelectric work in India and Pakistan financed under the Colombo Plan and we did several contracts internationally financed by the Export Development Company [Corporation] a division of the Government in Ottawa.

INTERVIEWER: Right.

MAW: I'd better carry on. Vancouver Iron Works went in to voluntary liquidation in 1978. [Later changed to 1968]. I had seen the problem coming so I had formed a company John L Maw & Associates offering engineering services to the Canadian or international market. I was able to take contracts that I had lined up for Vancouver Iron before it closed its doors, particularly a contract with an American company to make major components for the aircraft arrestor gear to be installed on an aircraft carrier being built by

the U.S. Navy in the Philadelphia Navy Yard. So when Vancouver [Iron Works] closed its door I carried the knowledge, or the information of this contract, over to Canadian Aviation Electronics plant in Vancouver which was well tooled for some of the work that I was able to acquire for them. They put in the additional tooling as necessary to handle that work including this contract on the arrestor gear. I was able to line up pulp and paper mill equipment work throughout North America for CAE (Canadian Aviation Electronics), which benefited them and my bank account also.

CAE after about three years of profitable association realized that they could very likely approach the customers that I had and cut me out of the picture so when they made a reasonable offer to buy out my company, I accepted it.

INTERVIEWER: Sold out to CAE?

MAW: After about a year of leisure I realized that I hadn't sold my company for sufficient funds to allow me to carry on for the rest of my life in this manner, nor did I enjoy the inactivity. So at that time Canadian Lucans, I shouldn't say Canadian, Lucans Steel Company of Pennsylvania with whom I had had a close association for several years were expanding in to Canada and putting together a team. I advised them that I'd be very pleased to look after their interests in B.C. and they said their only interest in me was if I would move to Toronto and take a senior position in their [planned Canadian] organization which led to my moving with my family, with part of my family, to Toronto.

After about three years with Lucans I realized that selling sheet steel didn't require much talent, didn't require much of a challenge. So I joined Toronto Iron Works (TIW) who had sizeable machine shop facilities and plate works in Toronto and this opened up again international marketing to them through work that I had been carrying on, on behalf of previous companies I was associated with. The activity in Alberta was very profound at that time with the oil and gas industries expanding rapidly, building refineries and gas processing plants requiring the type of product that could be manufactured by TIW. So I was spending more and more time in Alberta to the extent that by 1980 TIW thought it would be a good idea if I moved to Alberta as general manager of their operation out there where they already had a small fabricating plant but they wanted to get into a larger market that their capabilities in Toronto would open up to them. So my wife and I moved to Alberta just as the early 1980's slowdown in Canadian industrial activity occurred. By 1983 the company had been taken over by other owners in Toronto who were very keen to reduce their workforce as much as possible and as I had just arrived at my 65th birthday, they showed me the door.

INTERVIEWER: Right, do you know the name of that company by any chance?

MAW: Marshall Steel of Montreal, they took over TIW at that time.

INTERVIEWER: Right

MAW: Can I talk again?

INTERVIEWER: Sure.

MAW: I immediately reactivated my own company, [John L. Maw Associates, and] formed associations with companies in Toronto and Montreal including Fromson Heat Exchanger in Toronto and Navarro Industries in Montreal who were in the business of building and installing floating roofs in large storage tanks, generally tanks used for petroleum purposes. By this time companies and the population were becoming more and more conscious of environmental concerns and also the cost of petroleum products was skyrocketing so it was very important to minimize the evaporation losses in these huge storage tanks. So this ingenious design of floating roofs for these tanks proved of great interest to the industry. So, I was

able to look after their interests in many parts of Canada and I also represented Morrow Engineering of Vancouver who were trying to become more active in the Alberta marketplace.

This carried on until 1987 when Helmut Eppich, Chairman of Ebco Industries in Vancouver, approached me and wished to buy some of my time and use me as an adviser to him where I might be able to expand their areas of activity. This was an extremely interesting job as adviser to the Chairman of Ebco Industries who had 14 companies under their jurisdiction at this time including a state of the art air industries plant. My responsibilities were just advising the Chairman, I had no authority and no responsibility and he paid me handsomely.

Before very long I was giving him my full time and I had broken contact with my other clients. His plant a major steel fabricating plant in Richmond B.C., a suburb of Vancouver, allowed me to pursue participation in the vast armament program that Perrin Beatty, Minister of National Defence in the Mulroney government, was attempting to activate. In Beatty's plans and the Canadian Armed Forces at this time was building the new destroyer class. What was that class called? The DE's that we have now, the frigates that we have; the new Frigate program.

INTERVIEWER: Patrol Frigates.

MAW: Also they had plans to build 150 battle tanks and seriously considered building nuclear submarines. They were some pie in the sky ideas. I could see a place for Ebco Industries as participants in all this work.

INTERVIEWER: Did Ebco make any particular proposals for the Canadian Patrol Frigates?

MAW: No, we were working with subcontractors as we'll get on. As a consequence I was spending a lot of time in Ottawa talking to the supply people. Fortunately it was a retired Admiral who was in charge of procurement under these different phases.

INTERVIEWER: Do you remember his name?

MAW: No, unfortunately. He and I became good friends but I spent a lot of time on the nuclear submarines with the French Navy and British Navy both countries being well positioned to offer their nuclear submarines to Canada. Ebco Industries was one of the two companies in Canada, the other being Canadian Vickers in Montreal, that had experience in welding HY 100 high tensile steel, which is used in the hull of nuclear submarines. Vickers were already experienced, they were building hull components and shipping them by rail down to Groton where the U.S. is building all their nuclear submarines....

INTERVIEWER: Electric Boat

MAW: ...and we could foresee Ebco building hull components or anything else requiring HY 80 welding technology so I spent quite a bit of time with the English people and the French people because they would be in a position, one or the other, to obtain the prime contract and we would just be a component supplier to the successful company.

INTERVIEWER: You mentioned welding HY 100 then you mentioned HY 80 can you...?

MAW: Oh it should be HY 100 they're all numbers on up, it's up to 120 now. At this time 100 was the maximum that any company had experience in welding. I can also foresee Ebco being a component supplier to the battle tank order that Ottawa seemed to be seriously considering so I spent time with Krauss- Maffei in Germany and also with General Dynamics in the U.S. These were the only tank suppliers whose designs would appeal to the Canadian Army. So we were looking, at least Ebco, was looking at the

possibility of fabricating the turrets for instance for battle tanks and there were many other items, fuel tanks for instance and many other items that they could participate in.

INTERVIEWER: It is interesting but I was working for.... not for General Dynamics, they bought our company later on,so I was working on ship programs with an outfit called Computing Devices, which later became General Dynamics in Canada, which later...

MAW: Well General Dynamics had been in Canada for years and years. Hopkins was Chairman of General Dynamics after World War II and he was a great friend of C.D. Howe. So C.D. used General Dynamics' influence and knowledge when Canadair was formed, which General Dynamics had quite a piece of, for a long time. However, that's by the way.

INTERVIEWER: That's by the way, yes.

MAW: What else was there? There were many components of the Frigate program that were of great interest to Ebco and also this is when the Canadian Armed Forces seriously realized that they were needing an appreciable number of modern helicopters for air-sea rescue work and also each of the new...

INTERVIEWER: Antisubmarine warfare work.

MAW: ...frigates were being designed to carry their own helicopters . I was a personal friend of Murray Maynard, Chairman of ['AEF, Aluminum AF Aluminum Fabricating, AFI, not American,Aluminum Fabricating Industries I think' *later deleted by speaker, substituting 'DAF, Dominion Aluminum Fabricators*] who had developed the telescopic hangers for helicopter protection on destroyer class vessels. Also the Beartrap for assisting helicopters landing on a heaving quarterdeck in a rough sea.

INTERVIEWER: So they would be working with Fairey Aviation at that time on the aircraft?

MAW: No, as far as I know they were working directly with the U.S. Navy and Canadian Navy and Indian Navy. The Beartrap as you know is just a hook on the end of a cable that the helicopter drops down and it is shackled on the quarterdeck and the helicopter is pulled down on its own winch. So we were anticipating a certain amount of work with DAF [Dominion Aluminum Fabricators] that's it, DAF, through my association with Maynard.

INTERVIEWER: Okay, so that later became DAF Indal?

MAW: Indal, oh yes, about 1980, about the time I moved to Calgary.

INTERVIEWER: They were also involved with dipping sonar systems weren't they, Variable Depth Sonar handling equipment?

MAW: They could be, I don't know, but I'll just put in a paragraph here.

At this stage Mary Collins was Associate Minister of National Defence. She being a Vancouverite was very interested in seeing a reasonable portion of these new defence contracts being placed in Western Canada and also in the Maritime provinces. This was not necessarily a happy arrangement for the mid-Canada manufacturers who made it very clear to me that they could buy everything we could supply within a hundred mile radius of their plants and save the taxpayers a certain amount of money. But Collins insisted that a minimum of 15% of any defence contract had to be spent 15% in Western Canada 15% in the Maritimes. As a consequence Ebco was able to participate in a fair amount of work including the heavy steel bases for the auxiliary gas engines for the General Electric gas turbines, the secondary power units, in the new frigates. Ebco was also able to participate in the towed sonar gear that you were talking about.

INTERVIEWER: That would be the variable depth sonar or towed array sonar?

MAW: No, this is towed, but I'm confused here. The towed equipment was really for magnetic torpedoes or acoustic torpedoes, which would be homing on the noise of the propeller.

INTERVIEWER: Okay, that would be the Nixie system.

MAW: This would be a flapper type of thing.

INTERVIEWER: A decoy.

MAW: Was it known as Fox at one time?

INTERVIEWER: I know one called Nixie, but it had a predecessor. Nixie was an electronic noise maker that was towed in the water and that would have been in the nineties; developed in the eighties. Before that they had mechanical clappers that they towed behind the ships [CAAT].

MAW: I'm not sure just what it was Ebco did, but I think it was a towed sonar.

INTERVIEWER: There were two kinds of towed sonar one is the variable depth sonar and Indal became the primary manufacturer of the handling equipment and the faired cable and the other one was the towed array sonar which came out in ninety.....

MAW: Now that sounds much more familiar. When did that come out?

INTERVIEWER: Well I was actually the project manager for that. That was actually delivered to the CPF, the first one in 1992.

MAW: Were various companies involved in component supply?

INTERVIEWER: Yes, primarily it was General Dynamics Canada that designed the electronics suite for it. The handling gear was provided by the Navy and it was from Gould Electronics, which later changed its name - an outfit in the United States. But there were predecessors to that equipment. Before the production equipment there were other people involved. Westinghouse was involved. Defence Research Establishment Atlantic was involved. Probably DAF Indal was involved.

MAW: Well you had a very interesting period of your career.

INTERVIEWER: I did, but I'm not supposed to talk about myself.

MAW: Unless it's to someone who knows a bit about it.

Ebco also was a member of a team including FMC Corporation of San Jose California who were attempting to (I'm not hitting on the Navy totally) supply tracked light armoured vehicles to the Canadian Army and I spent a lot of time with them and on their behalf, pursuing people in Ottawa. The contract was eventually placed with General Motors in London Ontario who were supplying a rubber-tired vehicle.

INTERVIEWER: The LAV Recce (The Light Armoured Vehicle Reconnaissance). That was later bought out by General Dynamics Canada.

MAW: Oh was it? I didn't know that.

INTERVIEWER: They bought that whole outfit from General Motors.

MAW: Because, as you know it was the only manufacturer of rubber tired light armoured vehicles on the North American continent. Their biggest customer was the U.S. Marine Corps. However Ebco was able to supply certain components for these rubber tired vehicles that GM was supplying.

INTERVIEWER: Can you remember what some of those components were?

MAW: Well I know fuel tanks was one. Ebco, one of their divisions was light metal manufacturing that would take on things like fuel tanks and whatnot. So you can see I had a fair amount of input on the Armed Forces generally.

INTERVIEWER: Yes, that's fine, that's great. It's the Defence Industrial Base so we don't have to stick just with the Navy.

MAW: Just to digress for a moment, when I was with Lucans Steel I had a bit to do with [Canadian] Vickers-not Vickers- George M Davie in Lauzon, Quebec who had Davie Shipyard. There were two; Davie Shipyard and George M Davie, not related at all, each with their own yards within a few miles of each other. When I was with Lucans they were able to supply seven inch thick plate which was required for the magnets for the Triumpf, Atomic Research Facility in UBC. There were very, very few companies capable of machining seven inch plate and Davie Shipyard got it so I was going down and seeing them quite often, at a time when they had a contract to build six merchant ships for Greece. A lot of yards were building ships in graving docks. It was interesting these ships were ten or fifteen feet longer than the likes of the graving dock in Davie, so the ships were built on an incline. The hull on an incline, so the bow was sticking out at the end. It must have created terrible problems for somebody trying to determine a vertical and a horizontal. They were heavily Canadian government subsidized; the government at that time was trying to keep shipyards in business in case of international problems where Canada had to start building warships.

INTERVIEWER: What time period are we talking about?

MAW: Well, that was 1970 to 73. I was with Lucans and that's when I was going and coming , because Lucans was supplying the plate to Davie who was doing the machining for a company in Vancouver who had a lot to do with building the cyclotron, which is where the big magnets were required. So I enjoyed my visits to Davie because the head of Davie at the time was a fellow by the name [of] Veliotis who became famous in Canadian shipbuilding. He always sailed very close to the line ethically. His number two man was Gwyn, I think it was, who covered up a lot of the sins of his boss and Veliotis, I think, just beat Canadian law. He turned up in a senior position in the Atomic Navy Yard of the U.S. Navy down in Groton [CT]. He was highly thought of as a shipbuilder, but his ethics left a lot to be [desired]..... Whenever Veliotis' name was mentioned everyone said "Oooh, you knew him?" So it just gave me an opportunity to follow the shipbuilding a little bit by following the building of these Greek ships.

INTERVIEWER: Were you with Ebco until you retired finally? You were a consultant at Ebco?

MAW: They were just one of my clients when I started doing some work for them in 1987. Well, within three years Helmut wanted all of my time so it was going to simplify it for me to have one customer. As I say he paid well and I was travelling all over the world, well not all over the world, but spending a lot of time in France, England and Germany on armament work that the Conservative Government thought they were going to be buying and a lot of those things never took off as you know, like the battle tanks and the helicopters. I don't think...have they placed a contract yet?

INTERVIEWER: Yah they have, yah they have, I think they went with Sikorsky.

MAW: Oh, Sikorsky got it did they eventually?

INTERVIEWER: Yah eventually, I mean it was.....

End Tape 1 Side 1

Start Tape 1 Side 2

MAW: ...the company that owned Sikorsky, United...

INTERVIEWER: This is Tape 1 Side B and we're continuing on with John Maw's description of his industrial involvement with Canadian industrial base. Okay John where we left off with...

MAW: Well, I just wanted to mention Ebco was composed of 14 companies. By the way it was owned and operated by these two twin brothers who came over from Germany right after World War II, 21 years of age without more than a Pfennig between them in their pockets. Helmut, the aggressive brother, had taken apprenticeship training as a machinist in Germany and his brother, who was more of an accountant type, had trained in electro-metallurgy.

INTERVIEWER: Do you happen to know his name, the brother?

MAW: The brother, Helmut and Hugo.

INTERVIEWER: Hugo.

MAW: Hugo. Helmut and Hugo. They came to Canada, and somebody had advised them to locate in the Kitchener, Ontario area where there is a large ex-German population. But on the train up from Halifax to Montreal they met somebody who said "don't waste your time going to Kitchener, go right through to Vancouver", which they did. They rented a garage down towards the bottom of Granville Street in Vancouver, set up a little machine shop and that is where Ebco Industries started. Helmut was the idea man and the push and his brother was constantly trying to put the brakes on Helmut. But Helmut was a thinker and if he saw a problem that he was having trouble with somebody else resolving, he would say the hell with it and take over the problem himself and overcome it and first thing you know he has another product line.

One of his... He was unhappy with time control of the men in his plants. The old fashioned method was that each man would have a card and he would mark in the job he was working on and the time he started and he'd have to go to a time clock when he was moving to another piece of equipment and write his name and punch the time on it. This was known as the McBee System, I believe. Then somebody in the office would have a needle and there would be perforated holes and the girl would try to get the needle to go through and shake out the other ones and this is how they would determine the specific jobs that they had acquired time. Helmut thought this an awfully old fashioned system so he got thinking and he came up with an electronic system, which he then marketed as Ebco (oh, some nice technical name). It was a separate company and he was the big competition against IBM, who were in the same business. And that was a successful sideline.

He also... when the big cyclotron was building at Triumph for which Ebco was a major participant fabricating components for the big magnets and race track, but Helmut quickly realized that there were only two or probably three sources of radio isotopes for medical diagnostic purposes in Canada, one being Chalk River, another being, or about to be, Triumph and the third, McGill had a small cyclotron as did McMaster by this time, but these sources were supplying radio isotopes all over Canada and from the minute your radio isotope is ready, what is called decay sets in. If you are a hospital in Saskatoon you are a long way from the source so by the time they get their radio isotopes it may have decayed 50% of its life. So Helmut very assuredly said "well the answer to that is every hospital should have its own cyclotron". So he made a deal with Triumph for transference of technology and he took on a couple of nuclear physicists who had been working for Triumph and in no time he had a small machine that would allow every hospital to have their own source. The company sold one machine in the States, one in Korea and I had a lot to do

with the University of Sherbrooke in conjunction with Sherbrooke General Hospital buying one. I was spending a lot of time with Montreal General Hospital, no Notre Dame Hospital who we could see as a great market for another machine. But by the time the machine went into operation in Sherbrooke Quebec it didn't take long for them to realize that they could supply every hospital in Quebec with their machine so the market didn't quite develop numerically.

INTERVIEWER: What about other areas, like what happened to say Toronto, Saskatoon, Vancouver; were they not interested?

MAW: Well, no Edmonton put one in. Vancouver, they could get theirs from Triumph. I don't know about the Maritimes.

INTERVIEWER: So what happened to them, then?

MAW: I left the company some time after that. But that was a very interesting thing. The B.C. government was very, very supportive. We took a team across Canada meeting in the major cities with the cream of the cream of nuclear physicists. Every university would have some on staff usually and this was a very interesting exercise for me to go along with this team.

INTERVIEWER: So, what happened to that then, we are now completely dependent only on Chalk River?

MAW: Well I speak to Helmut every so often and he says he can't understand why the press continues to make it sound as if Chalk River was supplying 98% of the radio isotopes for the world. And I said well how about you and he said the one in Edmonton is running fine, the one in Sherbrooke is running fine, which is looking after the whole of the province of Quebec. And he said we're still building small cyclotrons not for Canada, but particularly for the U.S. and other parts of the world, but he said he can't understand why... He's not going out of his way to rock the boat.

INTERVIEWER: That is interesting isn't it? This is the first I've heard...

MAW: The point I'm trying to make is that's the type of man he is. If he runs into a problem and he can't find a satisfactory answer he gets a few knowledgeable people around him and they decide it and suddenly they're the leader in the world. You see the only competition in the world for these smaller cyclotrons was Siemens in Germany; you know the size of them, and General Electric in the States and little Ebco the third. But Ebco is nibbling off more than their share of the business.

INTERVIEWER: Canada is famous for that... Interesting things like that where they're on the forefront of something that never really gets the right press.

MAW: Well for what reason?

INTERVIEWER: I don't know. Maybe it's our demure nature as Canadians.

MAW: Just to carry on for a moment. I had joined Ebco when I was age 70 and I thought to myself that sounds pretty old but I enjoyed the work so much and seemed to be of appreciable help to Helmut, the Chairman, that I kept my association with him until I suddenly had my 80th birthday and I was becoming aware of voices whispering in small groups "when is the old Son of a Bitch going to retire?" so I thought I better retire, which I did.

INTERVIEWER: It's a very interesting and varied career you've had.

MAW: Career... series of careers.

INTERVIEWER: I'd like to go back to ...well first of all I want to reserve some time for the Princes. I'd like to go back for a minute on the Ebco and the industrial base aspect. There were all these plans that Perrin

Beatty had put up and all these proposals and activities that Ebco was getting involved with, how much of that actually came to fruition? Do you have any sense that...?

MAW: Well, there was never any tanks built or bought, the helicopters were put off. Ebco was working with the Scottish... Ferranti company who were supplying navigation equipment and I spent time with Ferranti. I must say I was not too sure what components Ebco would supply. This is what made me start talking about fine electronic equipment that they were designing and building for this time control situation for workers in the plant for instance.

This is the stupidity... I don't know how much you know about the helicopter fiasco. But what's the British helicopter company? They were associating with the Italians. Now at this time which would be 1987, perhaps, when the Canadian government was ready to go out for tender, this consortium of the Italian company and the British helicopter company [Augusta Westland] had just received a contract from the Royal Navy for something like 60 helicopters [EH-101] requiring similar equipment that Canada would want and the British contract had paid for all the development expense for this ancillary equipment and it made total sense to so many people to just say to the British, Italian consortium we'll add (our requirement wasn't nearly as big as what the Royal Navy was after) we'll just add it to it, save Canada all the development costs; but, oh no. You know the routine from your experience.

Battle tanks for instance and the same with the helicopters. Take battle tanks as a case in point. The Department of National Defence goes to every Colonel and above in the Canadian Army asking for his thoughts as to what a new battle tank should contain and of course all the thoughts come in and they tie it together and go out for tender and it's about three times what the NATO Krauss-Maffei [Leopard] and General Dynamics tanks are going for. So industry says well get rid of some of this damn jewellery and the Government does that and eight months later they go out for tender again. Eight months later the prices of everything have gone up. Time after, time after time.... As I said the battle tanks never did fly. I saw that happen in so many pieces of equipment. It was just ridiculous.

INTERVIEWER: I'm just trying to remember back because when I was working in General Dynamics it wasn't the group I was working in, I was with the Naval systems

MAW: Were you in Montreal?

INTERVIEWER: No, I was in Ottawa and I was working with the Naval Systems group, but they also had an Airborne group and they specialized in...

MAW: They had a which?

INTERVIEWER: An Airborne group and they specialized in avionics and sonar equipment; sonabuoy receivers and signal processors. And they were very busy bidding on those EH-101's and subsequent helicopter improvements.

MAW: Well excuse me a moment, this is what Ottawa couldn't understand. When a company has to prepare a tender for sophisticated equipment it can cost them a few million dollars, which they had to add to their price. So if they are asked to change it all, the cost of preparing the tender has to be added in.

INTERVIEWER: I know I used to prepare... no be in charge, to prepare tenders for some of this stuff. Yeh, it was a major exercise.

MAW: Excuse me a moment. You being with General Dynamics, were you familiar with General Atomics...

INTERVIEWER: No.

MAW: ...one of their subsidiaries, which was in the atomic business and their facility was in La Jolla California? I had a brother-in law who was an atomic research type who was involved in Canada's participation in the Manhattan Project and at the end of it he joined General Dynamics, no General Atomics, in La Jolla, which is a nice place to live, and was with them for a number of years and then joined the U.S. Atomic Energy Commission.

But to digress for a moment, as you probably know quite a number of the scientists who were involved in developing the first atomic bomb had a terrible guilt complex after the loss of life, including my brother in law, and he started studying theology and was very attentive to the Episcopalian church in the U.S. the equivalent of our Anglican church as you know. He eventually left the atomic energy group and became a priest in the Episcopal church. His career that way was not unlike a few other atomic people that were involved in the Manhattan Project.

INTERVIEWER: Yes that must be quite a thing. Can I just make sure I have the right spelling for Ebco?

MAW: Ebco which is Eppich Brothers Company you see; that is where the letters come from. It's too bad, I just threw out a brochure that they had put together for their 50th anniversary in Canada.

I mentioned that the brother Hugo had trained as an electrical metallurgist, which includes metal coatings such as cadmium or nickel or zinc, so Ebco had quite a facility in the metal coating business under Hugo's jurisdiction. The state of the aerospace plant that they built was just something else. Talk about state-of-the-art. It opened about 1988. The bed of the big milling machines, maybe I told you this -- 110 feet long with 3 gantries, 4 heads on each gantry, this is for machining the spars for the 747 for Boeing who were their big customer of course. It was state-of-the-art in everything; you couldn't get programmers from Canadian sources at that time, you had to bring them in from the States But to see these programs sitting with their little screen programming the big machines from this little machine little screen that they were working on; starting with the drawing of the component and as I say: state of the art. Typical Helmut he thought in keeping with the new plant, which was out in Richmond outside of Vancouver, he designed and had built all kinds of space technology aluminum furniture for the boardroom and the waiting room and whatnot. Talk about space era furniture, it was something else.

INTERVIEWER: Sounds like a really progressive company; they're still going gangbusters are they?

MAW: Well not gangbusters; they're suffering from the turndown in activity. There's no pulp mill building going on, which is a big part of their business. Mining is busy, but general steel fabrication.... but I keep in touch with Helmut, well maybe 2 or 3 times a year I phone him and we have a chat on how business is. He keeps saying that the little cyclotron business is purring along.

INTERVIEWER: That really amazes me, because I really had never heard that before that there was an alternative to Chalk River for medical isotopes except the Nordion company in Ottawa.

MAW: They were the sales agency for Chalk River isotopes. But you see the cyclotron, the little one for a hospital, would occupy a room about the size of this and a lot of it was taken up with 3 feet of concrete around it and a lot of lead. But compared to Chalk River and Triumpf, the one in Sherbrooke now is supplying the whole of the province of Quebec, all the hospitals.

INTERVIEWER: Do they supply a full range of isotopes or is this just a narrow range?

MAW: For medical diagnostic purposes; which is the big demand area. They are used industrially of course too.

INTERVIEWER: We talked a lot about your industrial experience, your sales experience and how that contributed or impinged on and how that interacted with the defence industrial base. You certainly have a very varied, interesting career.

MAW: It came together when the Conservative Government under Mulroney and Perrin Beatty had this grand program - 150 battle tanks, nuclear submarines.

INTERVIEWER: I was going to ask you, did you ever meet a Captain Blattmann when you were working?

MAW: It sounds familiar, but I, er...

INTERVIEWER: He sailed on a French nuclear submarine as part of the evaluation process and whether they would buy French....

MAW: I have a big medal presented to me by the French government (all their nuclear submarines are named after gems, as you know); and this one they chose a mermaid hanging out of the conning tower of a submarine and the name of this particular submarine on this It's a beautiful cast bronze medal in a little red box with all the red velvet underneath. It's right up here, I'll show you. They presented that to me out of appreciation for the time I'd spent with them on the program that never flew.

INTERVIEWER: I'd like to spend a few moments on the roots of all this, which was your time in "Prince Robert". Can we go back to the "Prince Robert" during the war? Can you generally describe whatever comes to mind?

MAW: Sure, well I'll do a little bit of foreground. I was, as mentioned previously, in the final class of young, generally new entry, Engineering Officers at Royal Roads; 50 in our class in conjunction with 50 cadets training as Executive Officers. Now I had trained as a Metallurgical Engineer at McGill and I don't know if the Navy was running out of Mechanical Engineers to further train, but of course they were far ahead of us Metallurgical Engineers and Mining Engineers in the information that we were supposed to acquire - which had to do with the make up of pumps and valves, boilers of course and all the ancillary equipment, the condensers and heat exchangers that the boys who had trained as Mechanical Engineers were way ahead of some of us, including myself. So when I was appointed to the "Robert" I had a lot of catching up to do on the practical training, but the Navy seems to have been happy with it.

INTERVIEWER: Remember we are talking at the beginning, before the tape was running, a little bit about the "Prince Robert" and the conversions that she had and she wasn't just a....

MAW: She was an Auxiliary Anti-Aircraft Cruiser, not an Armed Merchant Cruiser, after the second refit and second commissioning. That refit ended in June 1943 and our activity then was anti-aircraft protection of convoys running out of the UK down to Gibraltar and over to Italy and back and forth. (If you like I'll lend you one of these little books of mine; it will fill in background on my Navy activity).

INTERVIEWER: Right. I'm mostly interested in getting it on tape and your descriptions of it.

MAW: Unless you want to read sections out of the book, with your tape machine here.

INTERVIEWER: Well no I don't want to do that, I want to get your impressions on it. So you were in the U.K. phase. I understand there was also a phase when "Prince Robert", maybe it was before you joined her, when she working off the west coast of the United States.

MAW: Well, this was before Japan came into the war but heartening back to World War I the Germans had a number of raiders in the Pacific and there was fear that they would have a number in World War II. Many of them were Armed Merchant Cruisers, some of them large passenger ships and also there were a number of German ships holed up in various ports, North and South America, looking for an opportunity

when they can skedaddle back to Germany and shortly after "Prince Robert" commissioned, which as I say, I think was early July.

I think it was early September "Robert" was patrolling the coast of South America. There were German merchant ships in several ports and in Manzanilla there was about a 12,000 Ton modern German freighter called the "Wesser" and the "Robert" and Canadian Navy were aware that the "Wesser", which had a pretty good turn of speed I believe, would probably try to get out and head back to Germany. The "Robert" was hemmed in by the 20 mile limit of Mexican water off their coast so the "Robert" couldn't come within that, so she would patrol up and down outside and they became aware, I think they may have got word from shore side that the "Wesser" appeared to be preparing to make a run for it. She probably was getting steam up, vitting, fuelling and what not. The "Robert" tended to come well within the 20 mile limit at night time, which is strictly against international law and sure enough out comes the 'Wesser'. Now this is pitch black and the Roberts is in blackness and so is the "Wesser" but the "Robert" is aware. The "Robert" had elementary radar at that time and the "Robert" came pretty close to her and turned her search light on and signalled the "Wesser" to heave to. They had no idea who this ship was as far as they were concerned it might be a Mexican ship just checking out and the "Robert" said "we'll be sending a boarding party over".

The boarding party went onboard and scrambled up before the Germans realized that they were being taken over. So, there was a bit of bloodshed. Harold Moyst who was the Chief Bosun was in the boarding party and he tells the story, he had a pistol and one of the German Officers I guess got a little obstreperous and Harold couldn't find the trigger of his gun so he just grabbed it by the barrel and quietly hit the German over the head with his pistol butt and drew blood. That was about the only blood letting.

In no time the "Robert" had taken control of the ship and sent over a prize crew then and steamed her back to Vancouver where she became a British Merchantman. The "Wesser" was sunk about two years later by the Germans.

INTERVIEWER: You didn't get any prize money out of it?

MAW: I believe they did and I think it was the last time that prize money was ever paid to a Canadian warship. That's my belief. I knew Harold Moyst; he was a bosun when I was onboard and I knew him very well. He died here 5 or 6 years ago. The "Robert" was by far the most widely travelled warship in the Canadian Navy in World War II. She was in to Hong Kong twice, down to Australia and New Zealand escorting troopships up to Vancouver of young boys from there who were training in the Empire Air Training scheme here. She left Hong Kong just shortly before Pearl Harbour and then she was the second British ship or allied ship into Hong Kong after the Japanese gave up.

INTERVIEWER: Did she help in the release of prisoners?

MAW: Oh very much so and brought quite a few back onboard. Although the Japanese had signed the peace treaty, or whatever it was, they weren't about to give up some of their authority, they thought. Captain Creery was the Captain of "Robert". Creery was very well known; he ended up a Commodore I think. He had enough of this, so he got about a dozen of the biggest seamen on the "Robert" and gave them each a machine gun, probably a Sten gun and marched them to the Japanese Commander's headquarters and made it very clear that the Jap was taking orders from Creery now and no more of this calling any shots himself. It was rather tense. The fellow who painted this picture, Bill Johnson, was a great friend of mine and he was onboard the Robert at that time. He said it was a tense moment. There were enough Japanese around and well armed if they had overcome the little Canadian platoon very quickly. It was more demonstrative than anything else.

INTERVIEWER: I believe this ship was the last surviving of the Prince ships. The “Robert”, she lasted the longest. After she left and went out of the Navy she saw service still in...

MAW: She was bought by the Greeks, I believe, who converted her back to a cruise ship. In my little book there’s a whole post war history and she changed hands with different shipping lines and one of them cut her in two and added 50 feet to her. This is not generally known but the ships were ordered by Canadian National Steamships which is Canadian Government Merchant Marine. They were supposedly designed to work on the West Coast here and I think that they had just started fabrication, building them, and they realized the ships would be too long to get in to most of the little coastal ports up the coast so they chopped 50 feet out of her midships. They were relatively beamy for their length and that was the reason. This company then cut her in two and added the fifty feet back. I had a photograph of her as a cruise ship, (she is a fine looking vessel) - swimming pools and whatnot (I’ll just show you this little book of mine).

INTERVIEWER: Maybe we’ll just wind this up and then we’ll look at that. Well John, I would like to thank you very much for this interview. It’s been very interesting; you’ve had an incredible career starting with your time in the “Robert” ending in your various industries in the Canadian Industrial Base. I think it will be a good historical record for the folks in Ottawa, thank you.

MAW: Can I say a couple of words?

INTERVIEWER: Yes you can.

MAW: Sid, the pleasure has been all mine in trying to illuminate a few of my activities and the interesting thing of course is once you start talking, it’s amazing how your thoughts start to project back 50 or 60 or 70 years and how a lot of episodes have come to mind in this conversation with Sid. Thank you very much for the opportunity, Sid.

End of interview