STAYING AFLOAT

A Life in Shipbuilding

by

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Chapter 1

WHY NOT SHIPBUILDING?

I didn't set out to be a shipbuilder but I have only myself to blame for becoming one. Career guidance was a little thin on the ground when I was wondering what to do for a living.

At the prestigious prep school, just outside Oxford, that I had the good fortune to attend, I was a mathematician and it was taken for granted that I would go on to the famous university along the road and thence to whatever career it was that a mathematician might profitably pursue. But my father was absolutely clear: Oxford was too expensive and, if I wanted to go to a university, someone else would have to pay.

This created something of a problem not only for me but also for the school, which was not used to its bright young men doing anything other than going on to either Oxford or Cambridge. I'm not sure that they knew of the existence of other universities, at least at that time. Certainly, there was not a single master on the staff who was not a graduate of one of the two biggies. Generally speaking, if you couldn't get into either Oxford or Cambridge, you went into the Army or into Daddy's business.

I discussed the problem with the master whose responsibilities included careers guidance. I asked him what a mathematician did for a living. This was apparently a real poser. He thought very long and very hard and decided that it was either banking or insurance. Of course, his idea of a career in banking was something elegant and not too taxing at a well regarded merchant bank in the City of London, preferably the one that handled the Queen's money. Certainly not retail banking. Similarly, insurance, to him, meant Lloyd's, not State Farm. A technical career of any kind would never have occurred to him: manufacturing was simply not something one did. In retrospect, this was bizarre, because I soon discovered that many of my contemporaries were, in fact, the sons of engineers. Even more amazingly, a slightly older near-contemporary has just published a memoir of his 50 years in the shipbuilding industry.

Anyway, I left school in December 1957 without having either a place at a university or a job to go to. For a while I hung around my parents' house and the public library, half-heartedly doing what could be described now, in retrospect, as research, and wondering if it wouldn't be a good idea to do some time in the Army and put off the making of career decisions. I was in the first age group that did not have to do National Service and I rather regretted this. To a product of the English public

school system, National Service was what you did for two years between school and university. Not only did it hold no fears after the rigors of life at a public school, but it was widely regarded as both valuable and fun. To miss it because I was six weeks too young was something of a disappointment. Although National Service was over, however, there was still something called Short Service. This was an entirely voluntary enlistment for a minimum of three years and had the attraction of being much better paid than the two years of National Service. I now considered this course.

Before taking this drastic step, however, I managed to work out through my "research" that the answer to my career problem was something called engineering. This was not something that had ever been mentioned at school but it seemed to me that engineering would allow me to put my mathematical skills to work. And I soon discovered to my further delight that engineering firms actually paid for bright young men to go to university. So far so good, but what branch of engineering should I honor with my presence? Having had absolutely no exposure to industry of any kind, not even my father's, and never even having seen a factory from a distance, I had little feel for the relative attractions of the different fields and I fumbled my way through several interviews, effectively demonstrating my lack of knowledge of the businesses that I was professing to want to join.

I was rescued from this mire of indecision by my recently acquired brother-in-law. My older sister was married to a genial bloke called Norman Cowderoy, who was a shipbroker with H. Clarkson & Company, in London, specializing in the sale and purchase of ships. Clarksons were then, as they still are today, the world leader in the shipbroking business. I had, in fact, spent the preceding summer vacation in Norman's office, reorganizing his punch-card file of ships that had been or might again be for sale. Norman, whose brother was a civil engineer in Southern Rhodesia, building the great Kariba Dam, had already been helpful in my floundering around the engineering world, and it was now he who said to me the magic words, "Why Not Shipbuilding?" and thereby saved my life. Why not, indeed?

In no time at all, I had paid a visit to the Shipbuilding Employers' Federation's offices in London and been selected for its management training program. This meant that, if I could find a shipbuilder to take me on, I would do a five-year apprenticeship which would include studying naval architecture either at Glasgow University or at King's College, Newcastle. Step forward Norman once again. He introduced me to Ross Belch, who was at that time Assistant Managing Director of the very well known firm of Lithgows Limited, in Port Glasgow, on the lower reaches of the famous River Clyde. A quick trip to Scotland for an interview with Mr. Belch and I was ready to start my career in shipbuilding.

The Early Years

Although this is a memoir of the shipbuilding industry rather than an autobiography, some personal background is required in order to set the stage for what is to come. Besides, everyone's memoirs must always start with some agonizingly painful stuff about how idyllic/boring/miserable their childhood was.

I was born in 1939, in a comfortable middle-class family in a comfortable middle-class home in comfortable middle-class Esher, a quintessentially respectable London suburb. (Lots of Americans live there now, because the American School is just down the road.) My father was in the textile industry, a marketing man, with an office in Hanover Square, right in the heart of the West End of London. When the Blitz got rolling in 1940, he was relocated to Manchester and we moved to a comfortable house in Lower Peover, in the Cheshire countryside, where we stayed until 1949. As a result of this move, my memories of the war are entirely limited to occasional encounters with American servicemen and Italian POWs, all of whom were very friendly.

My memories of life in Cheshire are more vivid. The quality of that life was to a great extent driven by rationing, which continued into the 1950s. We raised geese and ducks for eggs and the occasional Sunday dinner, maintained a substantial vegetable garden and orchard, and kept five or six hives of bees, producing vast quantities of honey, which was very useful for barter trade. All this in a village that was listed in the 11th-century Domesday Survey, with a half-timbered church, a pub whose front door was in the churchyard, and a working smithy for the shire horses that still served the local farmers. It was everybody's image of the English countryside. It didn't last long, because in 1947 I was sent to a boarding school and in 1949, we moved back to Esher. My father was moving up in his profession and spending an increasing amount of time traveling. He usually took my mother with him, because he was heavily involved in the world of fashion: they went to all the fashion shows in London, Paris and Milan, and took vacations in some pretty nice places. My two

St. Oswald's, Lower Peover, with pub in background

sisters and I shared in none of this and were not even very close amongst ourselves, there being seven-year intervals between us. In fact, it was not what you would call a close family.

Father may not have paid much attention to us when we were growing up but he certainly did two great things for me. First, he gave me a flying start in life by sending me to two of the best private schools you could hope to find. And second, he passed on to me, in his genes, some small part of his great talent for marketing. It wasn't until much later in life that I fully appreciated this second gift, partly through meeting people who had worked for him and who, I was somewhat surprised to find, practically worshiped him.

Belmont

The first of the two private schools to which I was sent - pre-prep school in the American usage and just prep school in the English - was a wonderfully idiosyncratic establishment called Belmont, located in the village of Hassocks, on the slopes of the South Downs, a few miles north of Brighton. It was owned and run by the type of personality that is commonly described as "larger than life". Even his name - Maximilian de Wharton Burr - fit this description. The school was a big old ugly house that had been much added on to, standing in about 25 acres of grounds, about half of which were used as playing fields and about half of which were woodland. The previous headmaster had started it and must also have been quite a character: when the Army requisitioned the property in 1940, he packed up the school and moved it. Those boys whose parents went along with the idea, spent the duration of the war in Nassau, in the Bahamas, the remainder in Litchfield, in the English Midlands. About half the boys went to the Bahamas, so Mr. J, as he was known, must have been as admired by the parents of his time as Max Burr was by those of his.

Apart from the more routine academic subjects, Max Burr taught his boys such practical things as mental arithmetic and the laws of probability. Only a few of his graduates became, like me, mathematicians, but there can be little doubt that many were grateful to Max Burr later when they discovered how helpful these skills would be in real life, especially at the racetrack.

We learnt all kinds of unlikely things at Belmont. Wartime rationing being still with us, we built dams on the streams that ran through the property and diverted the water to vegetable gardens. We planted ash saplings on the horizontal, in the sides of WWII trenches: the saplings grew outward for a while and then turned upward, a year later becoming long enough and thick enough to be turned into walking sticks, complete with L-shaped handles. Printing was another unusual skill which we were encouraged to acquire: an enthusiasm for this art has stayed with me. And Max Burr's wife,

Helen, had been an Olympic silver medalist at archery, so we learnt archery too, not a sport commonly found even in English schools.

It was at Belmont that my aptitude for mathematics was identified and brought out, and Max Burr decided that I was sufficiently promising that I should attempt to win a scholarship to a really good public school - prep school in the American usage. The one at which he aimed me, with my father's compliance, was Radley, located just outside Oxford and about 40 miles west of London. Radley was very highly regarded then and is even more so today.

The Belmont rugby XV, with TC second from right, in the middle row

It would have been a major feather in Max Burr's cap to have a boy accepted there at all, let alone with a scholarship. And I won a scholarship, apparently being the only candidate to solve the one really difficult question in the mathematics exam. Burr was triumphant, and refused to allow his triumph to be even slightly tarnished by Radley's letter announcing its decision, which contained the wonderfully ambivalent statement that I had been awarded a scholarship "even though I had not offered Greek". In 1952, the basis of a gentleman's education was apparently still the classics.

Radley

Radley was and still is, one of the best schools in England, successfully turning out well-educated gentlemen. At Radley, in the best traditions of the English upper-middle class, I learnt to act like a gentleman, to play rugby and to row in a crew, and to tolerate all the incidental curiosities of the public school system, such as corporal punishment legally administered (often with relish) by the senior boys, bullying, idiotic rules of dress and behavior, compulsory cold baths, disgustingly bad food and zero exposure to the opposite sex. Somebody once said that the English public school was a worse hell than the English prison, a comparison I have fortunately not been in a position to verify, but one understands the point.

There were many good things about Radley apart from the extraordinarily high quality of the teaching, and I have many positive memories. One of them is of the entire school going by special train to the first day of Henley Royal Regatta, all dressed up in boaters, blazers and white flannels. Another is of the music. Radley had both an orchestra and a military band, in which I played the trombone, and later even a jazz band. Inspired by Humphrey Lyttelton, Chris Barber and other leaders of the European interest in jazz, a kindred spirit named Alex Lykiard and I started a jazz club and organized a band. We were assisted in this by the school trumpet instructor, who had actually been a regular in Ted Heath's big band. Jazz was disapproved of by many of the staff, including my own Social Tutor, (Radleian for house master), but we persevered and even staged a concert. Considering how we turned out, they may have been right to worry about the moral effect of jazz: Alex became, in later life, a successful translator of erotic poetry. The world being really quite small, I only recently discovered that he was also a member of a major Greek shipping family.

Radley had been founded in 1847, a product of the Oxford Movement, and the Chapel was a focus of college life. Membership of the Church of England was a requirement for admission and the daily routine included liberal doses of prayer but also, fortunately, even more liberal doses of singing. Being relatively high-church in outlook, we sang almost everything and to be one of 450 boys singing church music is a wonderful experience.

Radley College

The athletic side of a boy's education was considered enormously important: "*mens sana in corpore sano*" and all that. A boy at Radley had to opt to be either a "wet-bob" or a "dry-bob". A wet-bob rowed in the spring and summer and played rugby in the fall, while a dry-bob played hockey in the spring, cricket in the summer and rugby in

the fall. Afternoons were devoted to games. Monday afternoons were reserved for the Combined Cadet Force (i.e., Officers Training Corps) - also compulsory - and Sunday was the only day off. Tuesday through Saturday were for sport. The rule was that, if you were not selected for an organized match or crew outing, you had to do something else, such as a cross-country run or a scull on the river, both of which had to be of at least a specified minimum length. Cheating meant an automatic beating.

I was never more than competent at sports, barely making the 3rd VIII and the 3rd XV in my final year, but I enjoyed it greatly and never questioned the wisdom of the principle of compulsory games five days a week. There were undoubtedly many boys who hated every minute of it, but few rebelled openly. There were only two ways to escape it. One was to be good at something different: candidates included exotic upper-class sports such as real tennis, rackets, squash and fives, but there were those who sailed, played golf and even hunted with the school's own pack of beagles. The other way was to be so desperately bad at all sports that you were virtually permanently assigned to the freedom of the cross-country run. I can recall several of my contemporaries who took this latter route, although there never seemed to be much wrong with their athleticism. Their practice was to get the run out of the way as quickly as possible in order to free up the afternoon for other more interesting and often illegal activities, such as going to the movies and/or a pub in Oxford or even to the races in Newbury.

This description must make an English public school in the 1950s sound like a pretty strange place, but it all seemed perfectly normal to us. Things have changed in the past fifty years but not all that much. The school is about 50% bigger than it was in my time and prodigiously expensive. Boys now go on to a remarkably wide range of universities, not just to Oxford and Cambridge, and there is much less emphasis on team sports. Almost all schools like Radley are now co-ed, but not Radley. And they still have their beagles, even though hunting is now illegal.

But most of us were at Radley for an education and the academic side of things was undoubtedly superior. After surviving two years of being force-fed the classics, I was finally permitted to specialize in mathematics and was good enough, as Max Burr had foreseen, that it was immediately taken for granted that I would go on from Radley to Oxford University, an assumption that proved to be invalid, as we saw at the beginning of this chapter.

So the next stop in the journey would not be the dreaming spires of Oxford but the rusty cranes of Clydeside.

Chapter 2

THE CLYDE: A DIFFERENT WORLD

Port Glasgow was a company town. Although there were other industrial enterprises in the town, the major business activity and the major source of employment consisted of three large shipyards, all three of which, together with a collection of subcontractors and most of the surrounding housing stock, belonged to the Lithgow family. Boys followed their fathers into "the yard" as soon as they were old enough, which in those days was only sixteen. Now the yards are gone and they all work at IBM or Playtex.

Port Glasgow, with a population of about 25,000, is the easternmost of the three burghs that make up the Lower Clyde region. It lies about 20 miles west of and downstream from the city of Glasgow, on the south or left bank of the River Clyde. Next comes Greenock, at least twice the size and also largely industrial, and then Gourock, the smallest of the three and almost entirely residential.

When I arrived in Scotland in May of 1958, I went first to the boarding house in which my new employers had arranged a room for me. This was a highly respectable establishment, much favored by traveling salesmen, run by a Mrs. Shearer. It was located at 26 Forsyth Street, just off the Esplanade, in the equally highly respectable west end of Greenock, a short distance from Princes Pier, where transatlantic liners operated by Cunard and Canadian Pacific still called frequently. Its respectability was reinforced to me by its neighbor: the house next door was the official residence of the senior officer of the Royal Navy in the region, who had the splendid title of "Captain in Charge, Clyde".

Included in Mrs. Shearer's amazingly low rent of £1.25 a week – equivalent to about $3.50 at the exchange rate of those days – were a hearty breakfast, a substantial high tea, that is, a cooked meal in the early evening, and a solid cold supper before bed. Of course, I was only being paid about £2 a week, so there was little cash left over for frivolity.

Reporting to work that first Monday, wearing my brand new coveralls, was like stepping into another world. Part of my problem was cultural and part linguistic. They could understand me because I talked like the newsreaders on the BBC, but I could not understand more than about a quarter of what they said, so broad were the Clydeside accents. The company had decided that the first period of my apprenticeship, until the university year started in October, would be spent in the Carpenters department. I was introduced by the Personnel Manager to the Head Foreman Carpenter, a dour and almost completely unintelligible gentleman named

Tam Dean. Mr. Dean was wearing what I later discovered to be the Head Foreman's uniform: a three-piece suit topped by a bowler hat. He attempted to explain to me what a carpenter did. In modern terminology, a carpenter might be synonymous with a shipwright, but we don't have either in modern shipyards: maybe the best way of putting it is that a carpenter was a particularly skilled shipfitter. Mr. Dean also introduced me to one of his Foremen, a more approachable but still only partially intelligible person named Sandy Morrison, who was wearing what I later discovered to be the Foreman's uniform of a three-piece suit topped by a trilby hat. While these two discussed what to do with me, they gave me an assignment.

In one corner of the yard was a small forest of fabricated columns, each 40 to 60 feet tall and mounted on a steel-plate foundation: these were used to support gangways up to the decks of ships under construction. Each column consisted of a pair of channels connected together by regularly spaced flat bars that effectively created a double-sided ladder. I was given a tape measure and a piece of chalk, and told to measure the height of each of these columns and chalk the result on its base. This I did. But, noting that the sky looked very much like it was going to rain soon, (the normal appearance of the sky in the West of Scotland), I also made a rough plan view of the cluster of columns in my brand new notebook and recorded their heights in the notebook, thus ensuring that this valuable information would not be wiped out by the first shower. When I showed this to the foreman, I could see in his eyes that he was marking me down as much too smart for my own good and definitely not long for this career. Clearly, they really had no interest in the data that I had collected.

While I had been undergoing this test, it had been decided to assign me to work with a carpenter named Jimmy Thompson. Jimmy was a gentle soul who was probably given the assignment of taking me under his wing because he was from the Western Isles and his accent was relatively mild. His job was to mark the precise positions on each ship of all its attachments, including foundations for machinery and equipment, paint lines, and such. His essential tools were few: a notebook and pencil in which to make calculations; a tape measure; a lump of chalk and a length of string, for drawing straight lines; a hammer and dab (center punch), for marking where the chalk lines would have been if they hadn't been washed away in the night; and a sort of wax pencil for writing cryptic notes on steel plate. All these tools he kept in the pockets of a three-piece suit. I was beginning to feel distinctly underdressed in my coveralls, surrounded as I seemed to be by men in three-piece suits.

A Different Culture

When I got to know Jimmy Thompson well enough to ask him cultural questions, I found out about the shipyard dress code, which turned out to be partly a question of status and partly an early-warning system - you could see those bowler hats coming from a long way away. The system went like this:

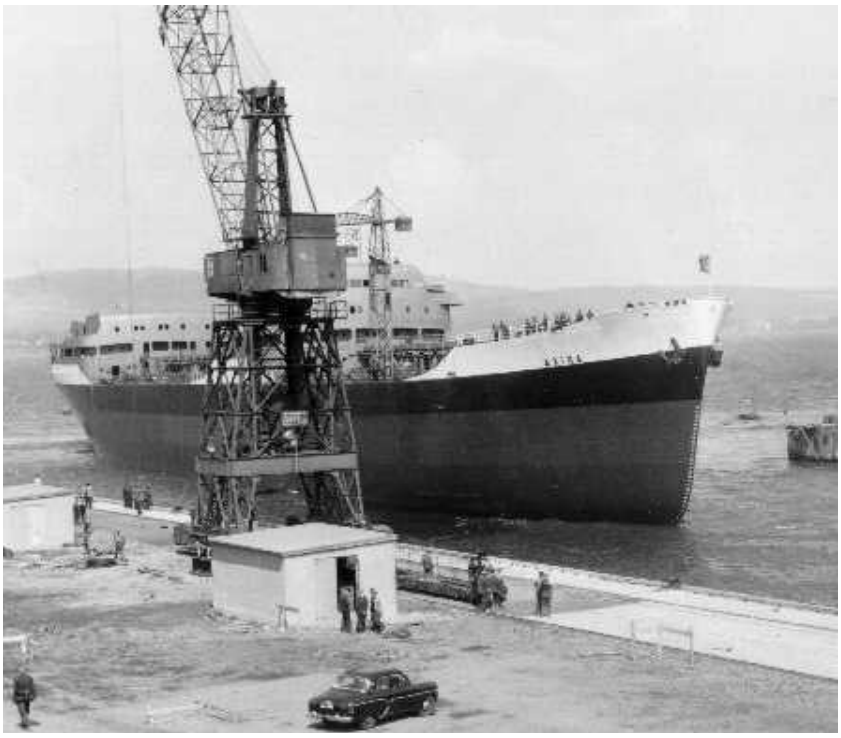
- Worker: no tie, flat cap (or bunnet, in Clydespeak).
- Assistant foreman: tie, bunnet.
- Foreman: tie, trilby hat.
- Head Foreman or Manager: tie, bowler hat.

In fact, they did not all wear three-piece suits, but certainly most of those over about 40 did. This was only 13 years after the end of World War II and clothes actually designed for working in had only recently become available. A typical cost-conscious Scotsman of the older generation, however, was not about to rush out and buy new clothes to wear to work when he already had a perfectly good three-piece suit for the purpose, complete with lots of convenient pockets in which to keep chalk, string, loose tea leaves, et cetera.

I did not realize it at the time, but this problem of working clothes was one on which my father was an expert. He spent a good part of his career trying to broaden, enliven and cheapen the choice of clothing available to ordinary men and women. He did this by introducing inexpensive cloth made from man-made fibers, by persuading famous designers to design clothes in these new fabrics, and by working closely with the large mass-market retailers – most notably Marks and Spencer – to make sure that they were easily available and economical.

The three-piece suits were, of course, made out of wool and the climate in Scotland can only be described as damp. Very damp. In the buses going home at the end of the day one could look around and see steam rising from one's co-workers. Everything was always damp. On the south bank of the Lower Clyde, where the residential areas rise up on tiered hillsides behind the waterfront industrial areas, even the humblest tenement can have a spectacular view of the hills of Argyll across the river. But the Weather Channel, if we had had it then, would have gone unwatched. We didn't need a weather forecast: we knew it by heart. It went like this:

"If you get up in the morning and you can see the hills across the river, it's going to rain. If you can't, it's already raining."



The "Axina" coming into the outfitting basin after its launch
(Photograph courtesy of www.clydesite.co.uk)

The first task that Jimmy Thompson and I performed together was to mark the paint lines on a tanker of about 18,000 deadweight tons – about 12,000 gross tons – known to us in the yard as Hull 1120 but to be known to the world as the S.T. (steam tanker) "Axina". The Axina spent its entire working life with Shell Oil's familiar red-and-yellow scallop-shell symbol on its stack. This was an interesting experience, not only technically speaking, but also emotionally. The scaffolding that surrounded a ship on the slipway in those days would not come close to meeting today's safety regulations. Not only were there few handrails, but in many places there were only two planks to stand on, and in some only one. Close to the bow of the ship, where the hull flared outward to the forecastle deck, I found myself standing on a single plank and leaning backwards with nothing behind me, while I held my end of Jimmy's chalked string. This soon became a familiar sensation and "Don't look down" became my personal motto.

We went on from paint lines to winch foundations and other tasks that did not present quite such a test for the nervous system and after four months not only were they letting me do it on my own but I found that I could actually understand most of what they were talking about. I was myself still the fat kid with the funny accent and Sandy Morrison still insisted on calling me Cecil, which he pronounced Ceecil. I never knew whether he thought that Cecil was my name or he was using it in mockery, as a stereotype of an upper-class name.

Four months was also more than enough to conclude that shipbuilding was going to be a very interesting career, to acquire a taste for Scottish beer, and to learn the intricacies of illegal off-track betting. The first of these three points is, of course, the significant one, though I didn't think so at the time.

Lithgows

Without really knowing it, I had gone to work for a shipbuilding powerhouse.

Tenement housing, the Port Glasgow waterfront, the River Clyde and the hills of Argyll, with rain on the way.

Lithgows' three yards in Port Glasgow were the Kingston Yard, the Glen Yard – formally known as William Hamilton & Company – and the East Yard. Total employment was about 5,000 and in that year of 1958, 11 large ocean-going ships were delivered – two tankers, three ore carriers, five break-bulk cargo ships and one refrigerated cargo ship, making a total of 92,000 gross registered tons, an enormous amount by the standards of the time.

Note that last figure. Eleven ships totaled 92,000 gross tons, an average of only about 8,500 gross tons per ship. Puny by today's standards. But in 1958, the world's largest tanker was only about 80,000 deadweight tons – maybe about 50,000 gross tons – and the average tanker in the world fleet was only about 16,000 deadweight tons – maybe about 10,000 gross tons – not much bigger than it had been in World War Two. The largest tanker that could get through the Suez Canal was only about 35,000 deadweight tons, a fifth of what it is today.

Note also that we built ore carriers, not bulk carriers. The general-purpose bulk carrier of today, with its sloping hopper and wing tanks, had not been invented. Grain and other low-density dry bulk cargoes were carried in break-bulk cargo ships whose holds were specially arranged with boards to prevent the cargo from shifting.

And break-bulk cargo ships, not containerships: the container had not yet been invented, let alone the containership. And a refrigerated cargo ship had a fully refrigerated hold, not a lot of power sockets for plugging in refrigerated containers.

Lithgows the shipyard was part of a larger entity, known as the Lithgow Group, which also owned one of the largest shipyards on the Upper Clyde – Fairfield Shipbuilding & Engineering. Fairfields at that time had about 4,000 employees and built bigger ships than we did, including passenger ships and warships: in 1958 they delivered two ships totaling 30,000 gross tons. Fairfields continues today as BAE Systems' Govan shipyard, one of only two active shipbuilders left on the Clyde.

The total Lithgow Group output in 1958 of 122,000 gross tons represented about 30% of the total output of all 24 Clyde yards and its total employment of 9,000 represented about 25% of the total employment of the 24 Clyde yards. To put it in today's perspective, this was more commercial tonnage in a single year than either the entire United Kingdom shipbuilding industry or the entire United States shipbuilding industry was producing by the end of the 20th century.

In addition to the four shipyards, the Lithgow Group also owned three marine engine builders – John G. Kincaid & Co., in Greenock, Fairfield Shipbuilding & Engineering Co., in Glasgow, and David Rowan & Co., also in Glasgow. These employed about another 5,000 people and their output represented about 30% of the total output of the 18 Clyde engine builders. There are no engine builders on the Clyde today.

Supplementing the shipyards and engine works, the Lithgow Group also owned its own joinery contractor, its own foundry and several smaller enterprises. During the eight years that I worked there, it acquired Ferguson Brothers, the remaining shipyard in Port Glasgow and a builder of specialized smaller ships and it developed the largest ship repair facility on the Clyde, at Inchgreen, adjoining the Kingston Yard. The last of these is still operating, although it is no longer owned by the Lithgow family.

The Lithgow Group was, in fact, the largest private-sector shipbuilding group in the world, either before or since. It was also determined not only to be one of the most successful, but to stay that way. This would be a challenge.

During the 12 years since World War II, the British shipbuilding industry, which had suffered less than those of its principal pre-war competitors in continental Europe and in Japan, had been bursting with work, rebuilding the world's merchant fleet. The post-war years were, therefore, highly profitable times. Competition could be seen approaching, however, as the Japanese and European industries were reconstructed with modern facilities, and as countries that had been neutral in the war, such as Sweden and Spain, entered the market. In addition, Colonel Nasser's nationalization of the Suez Canal in 1956 created overnight a demand for tankers that would be large enough to carry oil economically from the Persian Gulf to Europe and to the United States via the Cape of Good Hope.

Staying On Top

There were, therefore, two problems: the yards on the Clyde were too small – and the navigation channel too narrow – to build big ships and too technologically obsolete to compete with new yards. Add to these a third: industrial relations in British shipbuilding could not have been worse, particularly on the Clyde, which was known in those days as "Red Clydeside". I was amazed at the animosity and contempt shown both by managers for workers and by workers for managers. I could see first-hand that experienced shipyard workers were extraordinarily skilful, hard-working people and I marveled at the treatment that they tolerated. Having never previously entertained anything that might be described as a political opinion, I had no trouble now identifying with the workers rather than with the managers, although I knew better than to get involved or to express an opinion out loud.

Of course, the managers were good people too: the animosity was not genuine, it was just the way shipyards operated. When you switched from being hourly paid and a member of the union to being salaried and a member of the staff, you also switched your allegiance in the matter of industrial relations. This was exemplified by a bawdy version of the workers' anthem, "The Red Flag", which started:

"The working class can kiss my arse, I've got the foreman's job at last."

The fact that most of the people in the yard were neighbors, who went to the same churches and pubs and football games together, only made this bizarre arrangement the more idiotic.

In the course of the eight years that I worked at Lithgows, I saw many changes, some of which will be described in the next chapter. But the brutal fact was that, however much money they spent, the Lithgow yards were never going to be internationally competitive again. And if Lithgows couldn't do it, the other Clyde yards certainly weren't.

Japan had, in fact, overtaken Britain as the world's leading shipbuilding nation before I started out. This happened in 1956, only ten years after the end of the war. Japan's success was dismissed at first, as it was in other industries: the Japanese yards were not seen as a serious threat, despite their new yards. The only reasons they were getting any work were their low wages and their national policy that Japanese shipowners, who now needed entirely new fleets, must buy Japanese-built ships. Silly us. By the early sixties, not only were we no longer competitive on price, but we could not match the Japanese yards on delivery either. Something had to be done, but nothing was, and the weaker yards began to fail.

With so many jobs in economically disadvantaged regions, shipbuilding has always been politically sensitive. In 1966, Harold Wilson's government appointed a Royal Commission, which recommended that the large yards in each region be combined. On the Clyde, this resulted in the formation of two large shipbuilding groups, Upper Clyde Shipbuilders, on the Upper Clyde, in Glasgow, and Scott Lithgow on the Lower Clyde, in Greenock and Port Glasgow. Our sister company, Fairfields, became a part of Upper Clyde Shipbuilders and the three yards in Port Glasgow became a part of Scott Lithgow. In the course of this rationalization, the total number of active shipyards on the Clyde, which had been 24 when I started, was reduced to 15.

Scott Lithgow worked reasonably well, because only two companies were involved and their owners, the Scotts and the Lithgows, got on well enough. Upper Clyde Shipbuilders, however, was a disaster from the outset, as were similar combinations elsewhere in the U.K. As a result, James Callaghan's government nationalized the industry in 1978, creating British Shipbuilders. The number of active Clyde shipyards was promptly reduced from 15 to seven and this level of rationalization was even less successful than the first.

Five years later, Margaret Thatcher's government denationalized the industry but by then nobody could be found who had any interest in being a British shipbuilder and the number of active Clyde shipyards promptly fell from seven to three. One of those three – Ferguson Brothers, the small yard in Port Glasgow – closed in 2007. The two survivors – the former Yarrows and the Lithgow Group's Fairfields – both now belong to the monolithic BAE Systems and are kept alive by building bits of the very small number of warships still required by the ever-declining Royal Navy.

It is interesting to note that other European nations tried different approaches. Some eliminated all supports for their shipbuilding industries, letting their big yards fail. Others forced rationalization but kept up their financial supports for a while. Italy went straight to nationalization. Only Spain and Yugoslavia could still compete internationally, but not for long. The European shipbuilding industry today consists of a handful of large yards that only build large cruise ships and a much larger number of small yards that build high-value, high-complexity, small and mid-sized ships. There are obvious parallels with the U.S. shipbuilding industry, which today consists of a handful of large yards that only build large naval ships and a much larger number of small yards that build high-value, high-complexity, small and mid-sized ships.

It seems that there were lessons in the restructuring of the European shipbuilding industry for the U.S. shipbuilding industry, if anyone had been paying attention.

Chapter 3

THE CLYDE: AN EDUCATION IN EVERY SENSE

In October 1958, I began the academic side of my training, at the University of Glasgow, moving to a furnished apartment on Bank Street, shared with three other students, in order to be within walking distance of the action.

Having been at Radley, the University of Oxford was thoroughly familiar to me and I had a clear idea of what the life of an Oxford undergraduate was like. Glasgow was nothing like that. Here, 70% of the students lived at home and at least another 10% lived in halls of residence. All, it seemed, felt obliged to wear clothes that clearly identified them as students at the University, or "ra Uni" in Clydespeak. The university colors are black and gold, and the key garment was a black blazer with a gold-wire badge on the pocket. It was worn as much by the women as by the men, and it did nothing whatever for their glamour quotient. You could see a Glasgow student coming a hundred yards away.

Glasgow University

Extracurricular activities appeared to revolve around either sports or politics. The conventional sports were all available, of course, but so were several interesting ones that were new to me, such as shinty, a ferocious Highland invention that combines all the nastier elements of field hockey and lacrosse. I started playing rugby in a not-too-serious way, but I elected to play for the club back in Greenock, which I had already joined, rather than the University, because I already had friends in the Greenock area and I reckoned that I was going to be spending more time there than in Glasgow.

Political life at the University centered on the men-only Glasgow University Union, and, to a lesser extent, its distaff counterpart, the Queen Margaret Union, both of which were also the centers of most organized social activities. Everything at the Union seemed to be liberally lubricated by beer and I had no difficulty believing it

when I was told that the bar in the basement was Scottish Breweries' single biggest customer.

Mutton Pies: Ambrosia

The only food available in the Union bar was Scotland's ubiquitous mutton pie, a delicacy that most Americans would consider disgusting, but that we thought, and I still think, was marvelous. More elaborate meals could be had in the Union dining room, which served several thousand lunches every day: the most notable thing about this piece of information is that the only item that was never off the menu was haggis. And you thought it was only eaten on Burns Night. For variety, however, there were several inexpensive local establishments in those pre-fast food days – chip shops, greasy spoons, etc. – and the coffee shop had just been invented, despite the fact that tea rooms – very respectable – had been around for decades. But the best value was undoubtedly a curry.

My first year at Glasgow was plain sailing academically, because I had reached such an unusually high standard in my last year at Radley, and this encouraged me to fill my spare time by getting involved in student life. Having learned about printing at Belmont and put that knowledge to good use at Radley, I also looked in that direction at the University, almost immediately becoming Director of Publications for the Students Representative Council, a position I held throughout my active time at Glasgow. I think I got the job initially because it was one that nobody else wanted, but I enjoyed it. I was, in effect, the publisher of the University's bi-weekly newspaper, the GU Guardian, and its monthly magazine, known as GUM. I was a small-time Rupert Murdoch, holding immense power over all the politicians and literati who felt that these journals existed for their personal glorification.

Politicians we had aplenty. The Glasgow Union was at that time the leading debating center in Britain. Unlike the more famous Oxford and Cambridge Unions, which debate topics selected for their controversy-quotient and which invite publicity-hungry guest speakers, the four ancient Scottish universities – Glasgow, Edinburgh, St. Andrews and Aberdeen – debate political issues in a multi-party parliamentary format. While I was at Glasgow, John Smith, who was Tony Blair's predecessor as Leader of the Labor Party in Westminster, Donald Dewar, who was Scotland's first First Minister, and Ming Campbell, the current leader of the Liberal Democrat party, were among the stars of the Union's Friday night debates, which also featured performances by Iain and Neil MacCormick, the sons of that hero of Scottish Nationalism, "King John" MacCormick.

This kind of life could not be supported on my modest apprentice's wages, however, and I looked around for a source of additional income. In early 1959, I joined the Territorial Army, the British equivalent of the U.S. Army Reserve, and became a weekend warrior, incidentally satisfying the gap in my life created by missing National Service. More of this later.

A 1934 MGA

It was at about this time that I acquired my first car, an event that would normally be of no great interest except that this particular car came to a rather spectacular end. It was a 1934 MGA, lacking its top and generally in not particularly good condition, but OK for short distances and a lot of fun. It cost me all of £25. During a long weekend, while I was out of town, it was parked on the Esplanade in Greenock, near where I lived during the vacations, in Mrs. Shearer's boarding house. Late on the Saturday night, some merry pranksters put the gear shift in neutral, released the hand brake and pushed it down Princes Pier and into the River Clyde. They were seen, reported, and caught, but my little car was now an obstruction to shipping: Princes Pier was where the Cunard and Canadian Pacific liners picked up passengers for Canada. The next Cunarder had to stand off and use a tender to get its passengers on board. And I got a bill from the Clyde Port Authority for the cost of retrieving one small and very salty car from the river: I never paid it and nothing happened. In a foretaste of how insurance companies work, mine declined to pay, on the grounds that the stolen property had been recovered. I sold the wreck to an apprentice in the shipyard for £5: he restored it and had it going again within six months. I moved on to an Austin A35, less glamorous but at least you could lock it up.

Toward the end of my second year at Glasgow, in the spring of 1960, I managed to get rheumatic fever. I don't know quite how this happened but it certainly happened. I spent three months in Glasgow's Western Infirmary, for the first two of which I was essentially supine and drugged with large doses of aspirin. Once deemed to be recovering, I was able to take more notice of my surroundings, and pretty dismal they were. An 18-bed heart-disease ward in a National Health Service hospital in a large industrial city is not a pretty sight: large numbers of elderly Glaswegians were wheeled in and, shortly thereafter, the screens were pulled and then they were wheeled out again. For low-income old people, an NHS hospital was where you went to die.

The Western Infirmary being the University's teaching hospital and adjoining the University grounds, I did not lack for visitors and, students being students, my visitors showed up at highly irregular hours, often equipped with highly irregular gifts, such as bottles of beer, mutton pies – the student's staple food – and reading matter not normally found on the hospital library cart. I even continued in my Murdochian role, meeting regularly with the editor of the GU Guardian right there in the ward.

I recovered fully and experienced none of the after-effects that commonly plague rheumatic fever sufferers, but the timing of this misfortune was such that, not only was my second year ruined, but so was my third, with the net result that when I got back to Glasgow in October 1961, I was still in my second year, rather than my fourth. The remainder of my academic career was, however, uneventful and I eventually graduated without further disgracing myself, albeit two years late. Most of the lost time had been spent in the shipyard and I still found spare time for rugby, weekend soldiering and the tyrannizing of writers and politicians.

Back to the Yard

Returning to the shipyard in the university vacations and in the hiatus following my illness, I continued to roll through the various shipyard departments.

Having apparently mastered ship's carpentry, I next learnt to be a plater – a shipfitter in today's terminology – working first with an inside gang, laying out, cutting and shaping plates and stiffeners. The skill of the platers who led this crew impressed me. Transferring the precise positions and outlines of the material to be cut out and the location of intersecting structure from huge, crumpled and tea-stained rolls of drawings onto a flat plate seemed simple enough. Things got decidedly trickier, however, when the plate was not flat. This was clearly not a skill I was going to learn at the Uni and I set myself to understand how these men did what they did. It was a bit disconcerting to discover that the apprentice platers already knew: they had been going to night school for years.

One aspect of this spell in the yard was the changing technology. Plates and stiffeners were bent with the aid of heat. A huge furnace made them malleable and they were then bent into shape on an even larger cast-iron working platen, using large sledge hammers and wooden patterns that defined the required curvature.

The year I learnt this aspect of the trade, it became obsolete. Lithgows invested in two stunning pieces of new machinery, both of which were made by Hugh Smith of Glasgow and both of which suddenly became standard equipment in all large shipyards worldwide. The first was the pyramid roll press, in which even the largest

plate could be bent to a complex shape – that is, not just a simple radius, as in a cylinder, but a shape that changes from one end of a plate to the other and may even curve back on itself. The second was the frame bender, initially called a cold frame bender, in which the structural stiffeners of the ship's hull could be bent into gentle curves or tortuous S-curves, as required. By my next vacation, the furnaces and the cast-iron platens were gone.

Lithgows East Yard in the 1960s

That next vacation, I worked with an outside gang of platers, assembling the ship itself on the building berth. Like virtually every shipyard in the world at that time, Lithgows built ships on inclined ways, launching them stern first. On the Upper Clyde, the building berths were positioned at an acute angle to the line of the waterfront, because the river was so narrow that a ship had to be launched into the downstream flow. This requirement presented a serious obstacle to efficient yard layout and even the larger yards on the Upper Clyde, such as John Brown and Fairfield, were very cramped. Downstream, the river was much wider and building berths could be perpendicular to the waterfront but launchings still involved massive amounts of drag chains, so that the ship could be stopped dead as soon as it was afloat and not allowed to impale itself on the mud bank that lay on the other side of the navigation channel. As ships grew in size, this would become an increasing challenge: it seemed that angled building berths might have been better suited to the construction of the new generation of much larger ships, despite the constraints that they placed on the shoreside arrangement of a shipyard.

At that time, Lithgows' three Port Glasgow yards operated a total of ten building berths – two in the Kingston yard, three in the Glen yard and three in the East Yard – and averaged a production of about ten ships a year, that is, an average of one ship per berth per year. Construction practice was beginning to move beyond "stick building" – each plate, stiffener and web being erected individually. Most erection lifts now involved some degree of stiffened plating, although the panel line had not yet made its appearance, plus a limited amount of webs and other internal structure. The constraint was that most erection cranes were of only 15 tons capacity.

A feature of the Lithgow yards at this time that must surely have been unique in the shipbuilding industry worldwide was the method of transportation of prefabricated assemblies from the fabrication shop to the building berth. The vehicle employed was a conventional four-wheel trailer, but the motive power was provided by Clydesdales. Lithgows maintained a stable of about a dozen of these beautiful and placid beasts, and the men in the yards loved them dearly, treating them as personal pets. (They were similarly soft-hearted when it came to the scores of mangy cats that lived in the yard.) The relative economics of horse-drawn versus automotive transportation favored the Clydesdales as long as the typical load was 15 tons or less. As soon as the yards' construction technology shifted to larger assemblies, transportation technology inevitably shifted to larger trailers and to self-propelled, multi-wheel transporters, and the Clydesdales retired to a farm somewhere.

Erecting a ship in lifts of no more than 15 tons was, I discovered, hard work. Controlling the movement of the assembly as it hangs from a crane, positioning it, including the exertion of a good deal of brute force to get it placed precisely, holding it there while it is tack-welded into place, and checking its alignment as the erection process continued, all required a combination of considerable expertise and great physical effort. Some of that expertise is now a thing of the past: we use lasers to check alignment nowadays and few yards need to allow for the declivity of an inclined building berth.

Riveting

Another feature of that time which shortly disappeared was riveting. Although the international shipbuilding industry had discovered welding in the 1920s and all-welded ships had been common since the early 1940s, at Lithgows we were still riveting the bilge strake and the sheer strake. (For non-shipbuilders, the bilge strake is the end-to-end string of plates in a ship's hull where her bottom turns up to meet her side, and the sheer strake is the string of plates where her deck meets her side.) The plates for these strakes, together with their adjoining bottom, side and deck plates, had their rivet holes pre-punched in the platers' shop, on a hydraulic press. Once two adjoining plates were in place, a driller would check the alignment of the holes and, if necessary, ream them out, so that the rivet would fit: drillers would have made Olympic-caliber weight lifters.

Even more impressive, however, were the riveters. Each worked with a catcher, a holder-on – the L in holder-on is silent in Clydespeak – and a boy. The boy's job was to operate a small furnace that heated the rivets to the required shade of red-orange. When one was ready, he would pick it out of the furnace with a pair of pincers and chuck it to the catcher, who might be standing on a plank 60 feet up. The catcher would catch the red-hot rivet in his bunnet and use his own pair of pincers to pop it in the hole – quickly, before it set fire to his bunnet. The holder-on was there to hold the rivet in place, usually with a heavy beam of wood, leveraged from the uprights of the nearby scaffolding. The riveter himself was on the other side of the plating: when the small end of the rivet appeared through the hole, he would hammer it flat with his pneumatic riveting gun. You could always recognize a member of a riveter's gang: they all wore grotesquely charred bunnets.

At the end of the day, each riveter would sign his work on the hull plating, because he was generally paid piecework, that is, he got paid by the rivet, and was responsible for paying his own gang, making him, in effect, a form of subcontractor. A rivet inspector came along at the end of every shift and checked each riveter's performance. It is widely believed in the shipbuilding industry that the original Kilroy – as in "Kilroy Was Here" – was a rivet inspector in the Quincy shipyard, although there are different opinions as to which shipyard he worked in and I would be surprised if there were not several other industries who claim him.

During my short time as an outside plater, the ship that I worked on was a long way from being ready for the water, so I would not have expected to be involved in the launching process. I did, however, get that opportunity later, when a strike was called only a few days before a launch which also involved more than the usual degree of ceremonial and VIP attendance. The company was not fazed by this threat. The yard's management team would launch the ship, and so they did, assisted by the apprentices, who were not permitted to be union members. Since virtually every manager had risen from the ranks of craftsmen, this was no great challenge and everything went without a hitch, although accompanied by a good deal of ribaldry and teasing.

Launching the "Makrana" in the Glen Yard
(Photo from www.clydesite.co.uk)

I may not have been closely involved in our launchings, but I certainly attended all those that took place while I was there. One of Lithgows' better policies was that all work stopped for a launch and the gates were open for wives, families and neighbors. We always had huge crowds. There are few sights more stirring than that of a ship as it begins to move down a slipway, gradually accelerates and finally floats free. Side-launchings are exciting too, but this technique is generally used only for small ships and the grandeur associated with the large oceangoing ship is missing. And the launching of ships from a dock, however efficient, is totally lacking in romance.

In my eight years at Lithgows, we only had one mishap. A cargo liner hit the water a bit faster than expected, broke loose from its awaiting tugs and headed downstream stern first at about five knots. Fortunately, shipping was always halted for launchings, so a collision was unlikely. The question was, would it hit the left, industrialized, bank or the right, muddy, one. Fortunately again, it hit the mud and was relatively easy to recover in a damage-free condition.

Working Life

At this point it might be appropriate to discuss working conditions in a Clyde shipyard in those days.

When I first went to work at Lithgows, I was revolted by the conditions in which the shipyard's hourly-paid employees were expected to work. The place seemed positively Dickensian, as were the yard's industrial relations. As a result, it was a surprise to find that the Lithgow family was widely admired and respected. Of course, this was only to be expected in the professional sense. The first generation of the family, W. T. Lithgow, had been one of the partners in Russell & Company, a famous builder of iron sailing ships, and had taken control in 1891. His sons James and Henry had built the business into the integrated industrial corporation that I had joined. James had also directed the wartime British merchant shipbuilding effort – the British equivalent of Admiral Jerry Land – and had become Sir James for his efforts. And Sir James' son, Sir William, presumably recognizing his own lack of aptitude, had had the good sense to entrust the company's direction to what seemed to be a highly capable management team.

This last attribute was particularly unusual. Most of the Victorian-era family businesses in the region were still being run by members of the family: the current representatives of numerous proud family businesses could be found most lunchtimes at the Greenock Club – best noted for its billiard room – and most evenings at the Royal Gourock Yacht Club, doing their level best to drink the profits. Without exception, the next generation of these businesses chose totally different careers.

Lithgows also invested heavily in housing for its workers, some of which actually had plumbing, and was generally viewed as forward-thinking and even paternalistic. So how was it that life in the shipyard itself had to be so unpleasant? In later years, Japanese shipbuilders would complain about the difficulty of attracting young people to the industry because of the "three Ds" – it was viewed as dirty, dangerous and difficult – and Japanese shipyards were like hospitals compared to those on the Clyde, with rigorous safety procedures and extensive training and education programs.

First, there was mud: a relatively small proportion of the yard was paved and it rained all year round. Then there was rust: the steel was delivered to the yard rusty and it got rustier before it was eventually painted. And wet rust is even nastier than dry rust. Then there was the lack of sanitation: there were no showers or changing facilities – workers went home in the clothes in which they had come to work – and many did not have indoor plumbing, let alone laundry facilities, at home. The toilet facilities in the yard were both grossly inadequate and insultingly unsanitary, a condition made worse by the medieval restrictions on a worker leaving his post.

Health, safety and environmental concerns? Forget about it.

Most shipyard workers brought their own lunch, mystifyingly referred to as a "piece". This usually consisted of a door-stop of a sandwich, which they washed down with strong sweet tea. Tea leaves and sugar were carried in small battered containers that fit (of course) into the pockets of the vest of a three-piece suit. The tea itself was made by the simple expedient of boiling water in an old Heinz baked-beans can, using an oxy-acetylene torch, and then adding tea leaves. Workers could leave the yard during the lunch hour, of course, and there were several small general storees strategically located near the gates,but nowhere that actually served food. It was not until the mid-sixties that Lithgows got around to building a cafeteria, a building that also included showers and changing rooms. The general view among the management was that this investment was a complete waste of money and the workers wouldn't use it, but it turned out that the management was wrong about this, as it was about so many things.

Unlike most British shipyards, Lithgows had no formal tea breaks, a fact that was widely regarded in the yard as constituting a deplorable failure of negotiating skill on the part of the unions' shop stewards. There were, however, informal tea breaks at precisely set times, when the managers and foremen all disappeared. After all, managers and foremen need tea breaks too. The only exception to this rule was the General Manager of the East Yard, an unreconstructed type named Jimmy Buchanan, known as "Jimmy the Buck", who was oblivious to unwritten rules. Fortunately, he was well over six feet tall and you could see his bowler hat a good way away.

Jimmy the Buck was also notable for his unique way of putting his yard's shop stewards at a disadvantage. He would invite them in to his office and sit them down. He would then open a drawer of his desk, produce a bottle of a single malt and one glass, and pour himself a wee hoot. Sipping his whisky, he would then ask the poor shop stewards what it was that they wanted to discuss.

The one really positive feature of working in a shipyard was the training. All the shipyard's craft apprentices got the chance to go to night school, which was initially the James Watt College, in Greenock – named for Greenock's most famous son. They came out of the James Watt College with something called an Ordinary National Certificate, or ONC. The ones that did well could go on to Paisley Technical College and get a Higher National Certificate, or HNC – the equivalent of a Bachelor's degree – and beyond that, a Higher National Diploma, or HND – the equivalent of a Master's degree.

The smarter apprentices would also be channeled into a promotional scheme that started with a transfer to the Drawing Office and could lead to a manager's job. Almost everyone in Lithgows' technical and production staff had started as a craft apprentice and their further education had all been at night school. When I got my degree, the number of university graduates with technical degrees at Lithgows went up by 50%. And this was a company with 5,000 employees.

Why would anyone go to work in such a place? One reason was because their fathers had worked there and their fathers' fathers before them: the sons of Lithgow workers were preferred to other applicants, and there was never a shortage of applicants.

Another reason was that there was not a lot of choice. Apart from the shipyards themselves, most of the other industries in the area were shipyard-related – the engine builders, equipment manufacturers, etc. There was a distillery, of course: every town in Scotland had at least one distillery. And there were several sugar refineries: most of Britain's sugar came through Greenock. This environment was, however, changing rapidly in the 1960s: while I was there, several light industries moved into the area – most notably IBM, which established its single largest European assembly plant there. These companies had no difficulty in picking off the smarter young workers from the declining old-line industries.

And then there's the other reason for working in a shipyard. Any shipbuilder can and will tell you that, despite all the negatives, building ships is one of the most intellectually and emotionally satisfying occupations you could possibly find.

Chapter 4

THE CLYDE: MOVING UP AND ON

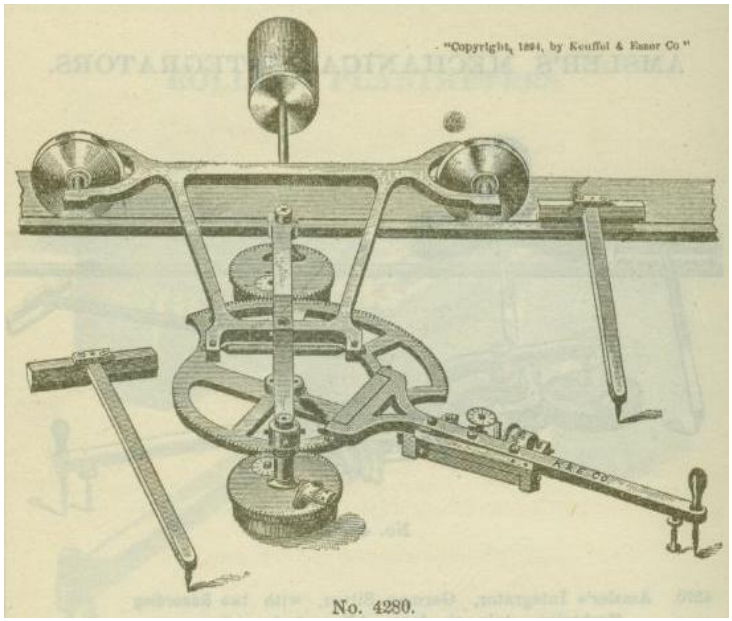
The next vacation, I got to come in out of the rain, but the skill I learnt that summer of 1959 was the only one that was truly useless. I spent eight full weeks making wooden hatch covers, of the kind that nowadays are only seen as ridiculously expensive coffee tables but at that time were still being used on tween-deckers. This was hard work, very boring, and I inhaled several trees' worth of sawdust, but the joiner shop was warm and dry and I watched the experts making custom furniture of exceptionally high quality. The joiner shop – the Caledonia Joinery Company, it was called – was operated as a profit center and it made furniture not only for Lithgows but also under contract to other shipbuilders and, in quiet times, for churches, schools and social clubs.

Moving up the technological ladder, I then learnt what it meant to be a loftsman, another job involving a blessedly warm and dry place to work. Many shipyard lofts still exist, although none are still used for their original purpose. As would be expected, the Lithgow loft was large, large enough to allow four separate half-bodies to be laid out. This was a wondrous sight. It appealed to the mathematician in me but I was also delighted by the physical appearance of the lines of a ship laid out in hundreds of superimposed half-sections, with colored connecting lines indicating the lines of the decks, the strakes of steel, the paint lines and all the rest. The craftsmanship involved in the fairing process, with flexible battens and weights, seemed to be more of an art than a science. Three years later, however, all this work was done on a computer and the loftsmen had been retrained to produce tenth-scale drawings in ink on Mylar. Mold lofts lingered on for a while, to allow the full-scale modeling of small sections of a ship, but before long they were increasingly being used for warehouse space or turned into planning offices.

Moving on to the Drawing Office, I was at last in the world of office workers, although the lowest form of that life. The Drawing Office occupied half the top floor of Lithgows' main office building, arranged in serried ranks of 12-foot drawing tables, with a glassed-in enclosure in one corner for the Chief Draftsman and a similar one in the diametrically opposite corner for the blue-print machine. Construction drawings were done in ink on linen, in a three-step process. An experienced draftsman would lay out the drawing and make all the critical decisions. A junior draftsman would fill in the details, working under the senior man's direction. Then, after the drawing was complete and checked, an apprentice draftsman would ink in all the pencil work.

The other half of the top floor of the office, separated from the Drawing Office by a conference room, was occupied by the Design Office, the Estimating Department – two men – the Technical Director and my home for the next vacation, the Calculations section, or, as we would call it in a U.S. shipyard, the Hull Scientific section.

This was the domain of Harry Thomas, who was always assisted by two apprentices. Harry was close to retirement when I worked with him and I sincerely hope that he got to retire before he found himself eliminated by the arrival of the computer. He was a cantankerous old buzzard of a man, with a hatful of nutty ideas, and he never failed to rise to the bait when we wanted to get him started. He hated anything modern, defining modern broadly as just about anything newer than the turn of the century. Among his peeves were automobiles: it was safer, he said, to walk along the railroad track, assuming that one knew the times of the trains. Jazz and pop music were similarly scorned as "worse than a bunch of cats on the roof, bejeez". And he would never fail to stop as he walked through the Design Office to watch someone using an electric keyboard calculator. Chuckling to himself about "bally sausage machines, bejeez", he was secure in his knowledge that calculators could never replace long-hand calculation.



The Amsler Integrator

Quirky, maybe, but Harry was tirelessly conscientious both in his work and in his assignment of teaching his apprentices how to do all the calculations involved in establishing the performance of a ship in different conditions, and how to do them in long-hand without ever making a mistake. In that corner office, the three of us did all the hydrostatic, stability and tank capacity calculations: this involved extensive use of the planimeter and the integrator, and endless long-hand applications of Simpson's Rules, all laid out in a standardized format in leather-bound ledgers. The end result was the ship's booklets for every ship that Lithgows built, small masterpieces of neat lettering and carefully colored drawings.

Finally, I spent my last vacation in the Design Office and here I discovered an aptitude for planning. They did not actually let me design anything in the Design Office. That would have been very foolish. They assigned me the task of working out how to break a ship into pieces for prefabrication and erection purposes. This was a relatively new requirement. A couple of years earlier, I had personally wrestled with two-dimensional assemblies no heavier than 15 tons, but now further capital investment was allowing the assembly of three-dimensional blocks of up to 50 tons. Someone had to work out how to break a ship into 50-ton blocks and that someone, apparently, was me. I enjoyed this challenge and it may have been at this point that I became firmly set on a career path that led away from designing ships and toward building them.

At about this time, I reached the end of my apprenticeship and I found myself a permanent member of the Design Office and the official hull breakdown person. Better still, my wages shot up to the princely sum of £20 a week, equivalent to almost $3,000 a year.

Weekend Warrior

The quality of my life outside the shipyard had been improving gradually and could by now almost be described as civilized. I had moved on from boarding houses to renting a very small two-room apartment in Gourock. I had also moved on to owning one of the first Mini-Coopers, essentially a biscuit box on wheels that could do over 100 mph, which was a graduation present from my father. And I had a fairly wide circle of friends, thanks to continued active participation in both the local rugby club and the Territorial Army, (the "T.A.").

I had joined 277 (Highland) Field Regiment, Royal Artillery, in early 1959 and within a year was commissioned a 2nd Lieutenant. The regiment was one of three field regiments in the famous 51st (Highland) Division: our job was to provide artillery support to an infantry brigade of three T.A. battalions – two of Argylls and one of Black Watch. We had the workhorse gun of WWII, the 25-pounder. In fact, the regiment had been all through WWII, having been

A 25-Pounder in Action

in both the army that was evacuated from Dunkirk and, rather more gloriously, Montgomery's Eighth Army, throughout the North African and Italian campaigns. When I joined, the Commanding Officer, all the Battery Commanders, all the Warrant Officers and more than half the NCOs and other ranks were WWII veterans.

One might have thought that anyone who had served in WWII would have had enough soldiering for one lifetime, but a big part of the T.A. in those days was the social life. This was somewhat alcoholic, but I had already discovered that all life in this part of Scotland – for all I knew, the whole of Scotland – was more than somewhat alcoholic. I soon realized that, while many of the regiment's personnel may have been there out of a genuine desire to serve, while others needed the extra money, many more were there for the cheap booze. Quite a few fell into all three categories.

The science of gunnery appealed to the mathematician in me and I found the professional side of week-end soldiering very satisfying. In the course of the next six years, I progressed from being a Gun Position Officer through Regimental Survey Officer to Second-in-Command of a battery.

Even a gunner regiment on industrial Clydeside occasionally got involved in good old British pageantry. Like many but by no means all T.A. regiments, we had a band, in our case, of course, a pipe band. And in our case, as it happened, an unusually good one, good enough that, in 1964, it won the World Open Pipe Band Championship. The reason it was so good was that the Pipe Major was a unique individual named John Weatherstone, who in civilian life was Scotland's leading manufacturer of bagpipes. For him, the band was an investment. Having a world-class band also had benefits for some of the rest us: our band got invited to play all over and an officer always had to go along. Mr. Weatherstone was fully capable, of course: he was in his fifties and a Warrant Officer, Class I, comparable to a Regimental Sergeant Major, and in private life the proprietor of a successful business. But armies being what they are, an officer always had to go along with the band, his duties really being confined to standing around in dress uniform, trying to look as though he was in charge, followed by drinks courtesy of whoever had requested our presence.

For gunners, the two weeks in the summer were the climax of the year, because it's hard to practice more than theory in a Drill Hall. Some years we went to ranges on the bleak moors of Northumberland, just across the English border, some years in the far-off southwest of Wales, and some years on Salisbury Plain, in the somewhat more civilized south. From the gunnery point of view, it didn't make much difference, but socially, Salisbury Plain had more to offer.

The T.A. was consolidated once while I was in it and again not long after I left. Checking the British Army's web site, I find that it is now practically invisible: the entire T.A. now includes just one field artillery regiment. Given that the regular British Army is now smaller than the U.S. Marine Corps and probably smaller than the New York City Police Department, I suppose I should not be surprised. This seems to me to be not just a shame but an example of severe myopia on the part of the British Government. Maintaining only a small but highly effective regular army may be a legitimate strategy for the 21st century, but how will they build it up in an emergency if there is no reserve? It is relevant to note that the U.S. Army was systematically increasing the size of its reserve component well before the Iraqi war demonstrated its value.

A final note about my time in the T.A. One of my most vivid memories is of our version of George MacDonald Fraser's legendary Private McAuslan. The dirtiest and most incompetent soldier in the world, Gunner Ptolemy – and how's that for a fine old Scottish name? – had served in the Regiment throughout the North African and Italian campaigns but nobody would let him anywhere near a gun, so he was now assigned as an officer's servant. Since he was completely incapable of keeping himself clean, neat and correctly turned out, there was little hope that he could be of any real assistance to any of his officers. And as a mess waiter, he was even worse: the filthy thumb in the soup was just the most obvious of his many shortcomings. Permanently unemployed and congenitally unemployable, living "on the broo" – Clydespeak for "on the borough", that is, on unemployment benefits – and supporting a large family, he never missed a parade and the cash that went with it, but always managed to be late, incorrectly dressed or drunk, if not all three. But he had been a real soldier, in a real war, and if anyone had ever proposed kicking him out there would have been a rebellion.

Planning Manager

During these years, Lithgows continued to flourish but only the particularly dense could not see trouble ahead. Shipbuilding in Japan was taking off. American managers at the yard in Kure owned by D. K. Ludwig's National Bulk Carriers were showing the Japanese how to build standard-design ships repetitively. The big Japanese trading houses were building huge new yards that could turn out ships that were much bigger than anything that had previously been built. And in Europe, the industry was being rebuilt with many more completely new, modern yards.

Most of the British shipyards were geographically constrained: we simply did not have the space that was required for the construction of big ships and we did not have the capital to build wholly new yards. And in Britain, labor relations were abysmal and

productivity was declining. There did not seem to be any way in which we were going to be able to compete at all, let alone retain our historical dominance.

Lithgows was one of the best shipyards in Europe but it was not in the same league as the large new Japanese yards. The company invested heavily in its facilities. In the Kingston Yard, it combined the building ways into one big one, with an unusual approach to construction. A single fixed 225-ton crane stood at the head of the berth and erected each ship one block at a time, starting at the stern and moving forward, with the hull moved physically down the ways, 40 feet at a time. I cannot imagine how anyone could have thought that this was how to build ships and, inevitably, it was not long before it was recognized to be less than optimally efficient.. At the same time, the seven berths in the Glen and East yards were combined into three mid-sized berths with more conventional crane service.

My big career opportunity came in 1964, when Lithgows' Managing Director, Ross Belch, came back from one of his sales trips and called his management team together. I was not one of that team – I was still doing hull unit breakdowns in the Design Office – but for some reason I was included in this particular meeting. I soon found out why. The boss had sold two fast refrigerated cargo liners to Federal Steam Navigation Company and three fast break-bulk liners to the Shipping Corporation of India at a tight price and on an even tighter delivery schedule. If we were going to be able to meet the schedule, we were going to need some more sophisticated project management tools than were then in use. The word "planning" was used for the first time. And who better to put in charge of this new function than the smart-ass with the English accent and the degree from the Uni, who was already doing work that was intended to increase throughput?

So suddenly I was in charge of planning, although at this point I was in charge of planning a five-ship program rather than all production activities. And naturally I was given no resources, guidance or instructions of any kind. Where to start?

It is not fair to say that there was at that time no planning at all at Lithgows. It just wasn't called planning. Ross Belch's basic management tool was a single large sheet of grid paper, with hull numbers down the left-hand side and calendar months across the top. The figures in the matrix were tons per month of steel through the fabrication shop and they had to add up to the corporate target. When a new contract was signed, each new hull was assigned a fabrication rate that depended on the size and type of ship and this figure was plugged into the chart, starting in the first month that had available capacity. Fabrication shop throughput was the defining parameter, as erection dock throughput is today. We knew that we could erect ships on the ways faster than the fabrication shop could produce steel, we knew that we could launch

any type of ship within two months of completing fabrication and we knew that we could deliver it three months after that. The pressure to perform was, therefore, on the fabrication shop manager. He, the slipway manager and the outfitting manager each did their own detailed planning, but in those days, we were never late with a delivery. If this could be called planning, it was simple enough and it seemed to work, at least as long as there was no real pressure.

Now, to meet the contractual deliveries of these five ships, all three stages of the construction process were going to have to work faster. In addition, the fabrication shop was now expected to produce much larger hull blocks, but little thought had been given to exactly how we were going to achieve this. No thought at all had been given to the subject of outfitting: the ship that slid into the water was all steel – absolutely no outfitting was done until the ship was in the water and moored in the outfitting basin.

After staring at the ceiling for a while, I called Neil Miller at the University of Glasgow. When I had last seen him, Dr. Miller had been working on ways of mechanizing simple shipbuilding processes, which set him miles apart from the other research fellows, all of whom were working in the fields of hydrodynamics, propeller design and similarly esoteric subjects, much loved of far too many naval architects. Dr. Miller advised me to call two chaps at the British Shipbuilding Research Association, located, illogically enough, near London Airport. This I did and discovered, to my delight, that they were working on the application to the planning of merchant ship construction of an American invention called PERT – Project Evaluation and Review Technique – which was being used by Electric Boat to plan submarine construction. Not only that, but their test-bed was Fairfield Shipbuilding, in Glasgow, a sister company within the Lithgow Group.

I was off and running. In no time at all I was drawing PERT networks by hand on my 12-foot drawing board and driving the outside managers and head foremen crazy with endless questions about which task comes before which and how long each took, specifying minimum, maximum and most likely. This proved to be very hard going for two reasons: first, I had not grasped the importance of first structuring the work hierarchically, and second, I had no means of processing my calculations other than by hand. I may have been good at mental arithmetic, but I was not that good.

Fortunately, management could see where I was headed and stepped forward. In no time, I had my own office, I had an assistant and I had access to a computer. My assistant was a young Indian who was a student apprentice – I must have started a trend – doing his academic work at what was then called the Royal College of Science and Technology – known in those days as "ra Tech", so as not to confuse it with ra

Uni – and is now Strathclyde University. He was a fast learner and could do mental arithmetic even more quickly than I could. The computer was a Gamma 10, made by Cie. Machines Bull, in France, and it was not so much a computer as a high-speed accounting machine. You sorted your punched cards into a particular order before you fed them into the computer and it added up the numbers for you and spat out a report. To get useful results, several iterations were needed. But it was a whole lot better than trying to do it by hand, even though I had to be exceptionally nice to the Accounting department to be allowed access to it.

Hull 1158, the "Westmorland"
Photo from www.clydesite.co.uk

Another few weeks and I was ready. The day we cut steel on the first of the five ships, I issued the first edition of the construction schedule for that ship – Hull 1158, later the "Westmorland". It was probably a pretty well worthless document, but the outside managers were remarkably patient and cooperative. After working out a whole lot of bugs and myriad errors and omissions, the schedule expanded to cover all five ships. A year later, I was planning all the yard's contracts, although the Planning Department was still just me and my one assistant. In retrospect, it's hard to imagine that I was doing much more than complicating the lives of the outside managers, but it was a start, and my successor as Planning Manager definitely took it to the next level.

Then the true recognition came. I was walking through the office one morning and Ross Belch came the other way. As he passed me, he said, barely looking at me and without breaking stride, "Tim, it's about time you got yourself a bowler." I knew what this meant. I was no longer just the planning chap: I was now the Planning Manager. An hour later, I got a phone call from Neil Mackay, the Office Manager and a famously laconic type. He said, "You'll be the noon lunch" and hung up. I knew what this meant, too. Lithgows had a management dining room. The outside managers ate at noon, the inside managers at one. The cost of buying a new bowler hat would at least be more than offset by the free lunches.

The best news of all, however, followed a few days later: my salary had been increased by 40%, from £20 a week to the astonishing sum of £1,400 a year, equivalent to almost $4,000 at the then-current exchange rate of $2.80.

Time to Move On

I suppose that, if I had stayed at Lithgows, I would have been well placed to succeed Ross Belch as Managing Director. I would have had to wait quite a while, because Ross was only in his mid-40s when I bailed out in 1966, and he continued to be Britain's most effective shipbuilding executive for many years to come, subsequently being Managing Director of both Scott Lithgow and British Shipbuilders, and being made Sir Ross for his efforts. Unfortunately, in these positions he also got to preside over the wind-up of the British shipbuilding industry. The U.S. shipbuilding industry may have its problems but at least it's still here.

I had never had any doubt that, sooner or later, I would emigrate. Most of my friends from the University – particularly those from the Engineering School – had already gone. My three closest friends in the Greenock area were now in the U.S., Abu Dhabi and Ghana.

Several of my fellow apprentices at the yard had also left, or were about to. The apprentice with whom I had shared a summer needling Harry Thomas, John Tucker, had already left for NASSCO, in San Diego, where he worked for thirty years and became head-and-shoulders the best VP Engineering in the US industry. John's brother James left too. Two other Lithgow apprentice brothers of that generation, Stewart and Alan Thoms, went to Canada and succeeded each other as President of Canadian Shipbuilding & Engineering. Such was the caliber of Lithgow-trained shipbuilders and the other Clyde yards were doing their bit as well.

Look around the marine industry worldwide and you will still find Clyde-trained men everywhere, not only in the shipyards but also running shipping companies, engineering firms, classification societies, offshore drilling companies, engine builders, whatever. You name the sector, there's a Scottish naval architect or marine engineer in there somewhere.

Lithgows had given me my start and I was grateful, but I had stayed with them for three years after completing my apprenticeship, I had made a small contribution to their success, or maybe I should say survival, and I did not think that I owed them anything more. It was time to move on.

At this point, I was very open-minded about where to go. In fishing around for opportunities, I was offered several junior-level jobs that didn't appeal too much, for a variety of reasons. Constructor officer in the South African Navy? I think not. Building drilling rigs in Norway? Maybe I should have taken that one, but I didn't.

Many Scottish shipbuilders and engineers headed for Canada, whose immigration policy in those days seemed to be "What are you waiting for? Come on over". When Canadian Vickers held interviews for people willing to work at a new shipyard that was being built in Newfoundland, I went along and found myself being offered the #2 management position, with the intriguing title of "Head of Production". I didn't know anything about building deep-sea trawlers but starting a yard from scratch sounded exciting and being a big fish in a small pond seemed like it might be a more interesting opportunity than the other way round.

So I sold the car, held a farewell party and headed for Newfoundland.

Chapter 5

NEWFOUNDLAND: AN EVEN MORE DIFFERENT WORLD

In 1966, the charismatic Joey Smallwood was still Premier of Newfoundland, the former British colony – Britain's oldest colony – which he had almost single-handedly dragged into the Canadian confederation in 1949 and whose economy he was still trying to drag into the 20th century.

One of Joey's many challenges was to create year-round employment for a people accustomed to fishing in summer and drawing unemployment benefits in winter. Part of this problem was the isolated character of the typical Newfoundland community. Of a total population of about 500,000, 20% lived in the capital, St. John's, and another 5% in the second city, Corner Brook. The other 375,000 lived in approximately 10,000 communities scattered around the rocky coastline and called "outports". Many of these communities had been established in the early days of the island's settlement, when the English, French and Portuguese, wanting to keep tight control of the cod fishery, forbade settlement. As a result, these communities tended to be well hidden. In 20th century terms, this made them not only hard to find, but extremely hard to provide with services, especially for a government with no money.

Smallwood's approach to this problem was first to tap the Canadian government for funds and then to concentrate the governmental assistance in selected towns, thus effectively forcing all but the most obstinate outport residents to relocate.

While most Newfoundlanders are of English, French or Portuguese ancestry, there is, in Marystown, on the Burin peninsular in southern Newfoundland, a community of Catholic Irish descent. Unemployment was higher here than anywhere else in the chronically underemployed island. Joey committed the provincial government not only to the construction of a large, modern fish plant in Marystown, but also to a shipyard for the maintenance and repair of the deep-sea trawler fleet. Going to Ottawa for financial assistance, he found more than he expected and the capabilities of the planned shipyard suddenly came to include the construction of deep-sea trawlers as well as their repair.

Such a shipyard was obviously going to require some imported expertise. The province contracted for this with Canadian Vickers, one of the subsidiaries of which was a small shipyard in Quebec that specialized in the construction of deep-sea trawlers, named George T. Davie & Sons. This company, known locally as "wee Davie" so as not to confuse it with its much larger neighbor, Davie Shipbuilding, would design the new shipyard, supervise its construction and manage its operation.

A nucleus of management personnel was hired for this purpose both in the U.K. and in Nova Scotia. I was the yard's first "Head of Production".

Flying to Canada from Glasgow in December 1966, we put down at Gander, in central Newfoundland, and it was here that I arrived in both Newfoundland and Canada, even though I would not get to Marystown for another few weeks. Gander was still a fairly important airport in those days, when so many planes had to refuel there, but it was nonetheless remote. Its 24-hour restaurant, bar and duty-free shop, restricted to transit passengers, made it a sort of a holding cell in a frozen wilderness.

My destination that Saturday, however, was Quebec City, where I was met at the airport by Jean-Yves Rheaume, then the Planning Manager at George T. Davie and later, for decades, the VP Operations at Davie Shipbuilding. Jean-Yves drove me through the frozen streets of wintertime Quebec and deposited me at the Rond-Point Hotel in Levis, with the assurance that Ken Clarke, the General Manager-designate of the Marystown shipyard, (which was then called Newfoundland Marine Works), would be around shortly.

Ken duly showed up at my hotel room door, at about 7 p.m., armed with two six-packs of Labatt 50, and turned on my television. My first night in the New World was to be spent watching "Hockey Night in Canada" and drinking cold beer out of the bottle. Bienvenue à Quebec.

We got down to work on Monday, however, and I discovered that the shipyard was not yet fully designed, let alone built. This was going to be very interesting. The project team included not only me and the two men I had just met, but a naval architect from Halifax named Martin Yeatman, and the President of George T. Davie, a pint-sized dynamo named Ken Wood.

After two weeks in Quebec, Ken Clarke and I headed for Marystown, once again flying in to Gander, where we were met by the only other employee of the company at that point in its development, an Ulsterman from Harland & Wolff, named Mike Coleman, who would be the Maintenance Foreman. We drove the two hundred miles of snow-packed road to Marystown in a four-wheel-drive Jeep station wagon. There was no town of any kind between Gander and Marystown, just endless white nothing, with no traffic, occasional bits of forest and, once in a while, a house or two. Later on, we would have recruits from the U.K. who would take one look at this and ask to be put on the next plane home, but I was not one of them. I thought that this was going to be great.

A Backwater

It is hard to imagine what a quiet place Marystown was before we built that shipyard. Here is a flavor of life there in 1967. No paved roads. No public entertainment of any kind. Private entertainment was plentiful: I have never met a more hospitable people. One restaurant, unlicensed. No public electricity, water or sewage: houses had generators, wells and sewage lines leading out into the bay.

The nearest liquor store was in St. John's, 200 miles away. If you wanted a bottle, you gave the money to one of the town's three taxi-drivers and he brought it back for you. Beer you could buy at the gas station, but only by the case. This liquor availability problem turned out to be not quite as bad as it had at first seemed. After the outsiders had been there for a few weeks, the locals let us in on the secret: there were quite a few locals who acted as unofficial liquor dealers. By far the best of these was the town doctor.

Newfoundland could not attract Canadian doctors to a life in the outports, but it could attract Europeans. Our doctor was a young Spaniard named Felix Martinez and he was a character. As in most homes in the area, Felix's basement was a cross between a family room, a games room and a party room, with a built-in wet bar. Unlike most homes, however, Felix's wet bar was stocked with enough booze to float several aircraft carriers. If you needed a bottle of anything at short notice, you borrowed it from Felix and replaced it later. Or not, as the case may be: Felix didn't seem to care.

Felix was paid by the federal government to be the family doctor for a wide area that centered on Marystown, but he also operated as unofficial dentist and veterinary surgeon, and stepped in as surgeon at the tiny cottage hospital in the town of Burin when needed. He was tireless. He became so frustrated, however, by the difficulty of getting people who urgently needed serious attention to the real hospital in St. John's that in 1967 he returned from a trip to Montreal driving a brand-new Cadillac ambulance, which he donated to the community.

I soon noticed that the quality of wine being consumed in Marystown homes was remarkably good, much too good to be coming from the government-controlled liquor stores in St. John's. Consult your atlas. Just off the southern tip of the Burin Peninsular lie the French islands of Saint Pierre et Miquelon, overlooked when the Brits threw the French out of Canada. They are now an "overseas territory" of France, with representation in the National Assembly, an overseas territory being not so much a colony as an integral part of France that just happens to be overseas.

A visitor to Saint Pierre might be forgiven if he were to think that he was in Brittany. It's a delightful place. Harborside restaurants and cafés, gendarmes, fishing boats, pretty girls, the works. And excellent wine, much of which found its way across the strait to Newfoundland.

Buying wine and liquor in France and bringing it in to Canada on a trawler was, of course, illegal and the Mounties operated a patrol boat in the area, in a forlorn attempt to intercept these nocturnal transits. But the locals managed to baffle the federal agents with the aid of the federal government itself. The salt needed by Newfoundland fishermen to assist in the drying of cod was provided by the government as a subsidy. It came in blocks. The fishermen knew how long it took a block of salt of a given weight to dissolve in sea water. They tied blocks of salt to cases of wine wrapped in a life preserver and, if the patrol boat caught them, they would throw the wine overboard, plead innocence and return later when the salt had melted and the wine had bobbed back up to the surface. Somehow one doubts that this mischievous behavior happened as often as they said it did, but it nevertheless sums up the Newfoundland character - an independent spirit, a sense of humor, a love of life.

Another example of this refreshing approach to life can be found in the way that we resolved the problem of Marystown not having a pub. The contractor that was building both the fish plant and the shipyard maintained a camp, in which several hundred workers were billeted, including quite a few from Quebec. This was not a happy crew, with nowhere to go and nothing to do in their spare time. Ken Clarke and I solved this problem, with the delighted connivance of the Mayor. There was a big old house on the site of the shipyard, much added to over the years, which had been compulsorily purchased and was now surplus. We asked the Mayor to come and visit, and we put it to him that, if he could find a suitable plot, within walking distance of where the shipyard gate was going to be, we would move this old house to that plot and donate it to the Canadian Legion. Mayor Eddy Reddy got the point immediately. He was back the next day with an offer of a site and we had the house moved and functional – well dug, generator operating, etc. – within a week.

We then started the Marystown branch of the Canadian Legion, which is one of the very few organizations in Canada that does not need a permit to operate a bar. The brewers' representatives from St. John's were there like lightning. In no time, we had a full mahogany bar, a pool table, darts boards, a jukebox, the works. We also had three genuine members of the Canadian Legion, men who had actually served in the Canadian Armed Forces, and about 400 affiliate members.

The local priest, Father Aloysius Penny, was not too happy about this development or about our next move to liven up his town. Marystown had a quite substantial Church Hall, but it was very rarely used. We proposed starting Friday night dances and Father Penny was horrified. By this time, however, the mayor and the other local civic leaders had worked out that times were changing and the priest no longer had veto power over anything and everything that went on in Marystown. They put pressure on the poor man and we compromised on monthly dances. The monthly dances were so popular, however, that they soon became weekly dances and Father Penny's opposition to all this organized frivolity evaporated in the face of the additional income to the parish fund.

Building the Yard

Meanwhile, construction of the yard was falling behind schedule and we had ships we needed to be building. Our initial contract was for four 150-foot stern trawlers for Atlantic Fisheries, Ltd., the company that would operate the new fish plant, with options for four more. We soon had to make the decision to switch construction of the first two to the George T. Davie shipyard back in Quebec. The civil works in the yard were well along but delivery of much of the specialized machinery and equipment had been delayed.

This was, and still is, a gem of a small shipyard. Its design revolved around a Syncrolift, with dimensions 80 meters long by 10 meters wide, and a rated lifting capacity of 2500 tonnes. New ships could be built completely under cover, in a heated fabrication and construction building. The transfer system allowed repair positions for us to work on as many as six 80-meter vessels at the same time. The waterfront was sufficient to moor up to six ships at a time alongside.

The Marystown Shipyard

Building the shipyard was only part of the task in front of us. We also needed to build a workforce. We knew that we could depend on George T. Davie for technical support and we proposed to model our various operating systems and procedures on theirs. All the key personnel had been recruited. Now we needed to train some workers. With this in mind, we advertised throughout the Atlantic Provinces for anyone with relevant skills, and got some response, but most Newfoundlanders were

accustomed to wooden boats. Fortunately, the provincial government had recently established a vocational school in nearby Burin, and here we established a training program designed by a committee of all our U.K. imports and based on their collective but sometimes fuzzy recollection of their night-school classes back home. It seemed to work.

In late 1967, when the Syncrolift had been fully tested and accepted, we formally christened the shipyard, with the Canadian Coast Guard cutter "Montmorency" on the lift and Premier Joey Smallwood himself to cut the ceremonial ribbon. We were now open for business. Repair business, that is, for we were still a little way from being ready to start building a ship. Most notably, we had a steel stockyard with a fine crushed rock base and a beautiful pair of crane rails but no crane and no steel. Worse, the steel arrived before the crane did, delivered in the hold of a small freighter alongside a ramshackle wooden pier belonging to the Mayor. Worse still, we could not find any identifying markings anywhere on the steel. We had no choice but to unload the steel and stack it in the stockyard, where it promptly got covered by snow and ice.

The word that we were open for business spread but not necessarily in all the right directions. About half our early inquiries were from operators of wooden fishing vessels. Nobody had ever considered this possibility: we were geared up for steel. Our Outfit Superintendent, an enterprising Nova Scotian named Joe Devoe, took this in his stride, however. He recruited some local boatbuilders and pronounced himself ready to handle wooden boats. About one in four of our early repair customers were wooden boats.

Another curious feature of our repair business was that few of our customers seemed to think it necessary to call ahead: they mostly just showed up. It was always interesting to drive in to the yard in the morning and see who or what had arrived during the night.

We undertook some unusual jobs at Marystown. One of the most memorable was a small, fast refrigerated cargo ship called the "Ocean Sprinter". It had a cargo of frozen fish fingers from Nova Scotia and frozen french fries from Prince Edward Island, all packaged and ready for the deep freeze sections of English supermarkets. A ballast line had broken and water had got into the cargo hold. The weather was vile and the ship was nearly lost but it made it into our ice-free bay with several extra tons of ice all over its deck and superstructure. To fix the problem, we first had to remove several hundred tons of frozen fish and chips, now congealed into one huge solid frozen mass, a task that took several days in extremely unpleasant conditions.

We were very popular with trawlers from the Eastern bloc – Russians, Poles and East Germans. These boats stayed away from home for very long periods and there were few places were their crews could go ashore. They weren't allowed off the boat in Marystown either, but they seemed to welcome the break in the routine. We made them pay cash, of course, and were intrigued to discover that each friendly, non-English-speaking skipper was accompanied by an unfriendly, English-speaking, cash-carrying, administrative officer.

There were strange Canadians too. At this time, the West Coast herring fishery had been shut down because of over-fishing and several west coast boats were working in the east, feeding herring to a fishmeal plant on Newfoundland's south coast. One of these west coast boats was a converted U.S. Navy minesweeper, the owner/operator of which lived permanently aboard, in a suite of cabins outfitted to a standard that would be hard to find on one of today's luxury megayachts. This boat was a frequent visitor, always with a problem that was somewhat unusual, such as a long gash in the hull above the waterline. After the first visit, we gave up asking him how these strange accidents happened. He always paid in cash and he always spread gifts around our supervisors. His standard gift for me was a box of herring: this had no significant value but I am one of those strange people who like to eat grilled herring.

Living in Marystown

Living in Marystown was as interesting an experience as was working there. In the early months, I stayed in a boarding house. I could have rented one of the houses that had been built especially for the fish plant and shipyard people, but being single and still in my twenties, I did not see the point of that. As soon as the construction work started winding down, however, I bought one of the contractor's trailers and persuaded them to set it up for me at the end of a lane that petered out at a little cove, about three miles outside of Marystown. Ducey's Cove was a pretty spot and very private. My only company was a big old bull seal who took up residence in the winter months on a small rock just offshore.

The weather was far from being as bad as most people expect. Snow everywhere in winter, of course, but all three of the other seasons, including delightful summer weather, primarily because we were on the south coast and close to the Gulf Stream.

The principal, if not the only, form of entertainment in Marystown was going to parties in other peoples' houses, and this was fine. I went to St. John's a few times: it was nice to get a change of scene, but, frankly, there was not much to do in St. John's either. After you had had dinner in the Hotel Newfoundland and a bit of a pub crawl, that was it.

In Newfoundland, hunting was not a sport, it was part of the way of life. Moose, caribou and bear hunting were controlled by licensing but it certainly seemed that just about every adult male made sure that he shot his moose every season. After all, a full-grown moose represented a lot of meat, an important consideration in an economy in which most people were unemployed for a good part of the year. Fishing was popular with those who had never had to fish for their livelihood: there were lakes in the interior that were not on the charts and both the doctor and the bank manager came back from trips with the biggest trout that I have ever seen.

Big trout and small lobsters. In the summer of the yard's second year, after it was operational and we actually had a main gate, a battered old fisherman with a battered old pick-up truck started showing up at the end of the day on Fridays. The bed of his truck had a big tarpaulin spread over it, to create a form of tank, and in this tank were hundreds of lobsters. A dollar a lobster, take your pick, as many as you like, cash only. It may be that these lobsters were under the minimum weight to be sold legally: I don't know, because I never weighed one, but I certainly ate a whole lot of them. I've never understood why fancy steakhouses love to offer their customers giant lobsters: the fact is that bigger means older and older means tougher. The other basic fact about lobsters is that, like salmon, raspberries and a lot of other good things, the farther north their habitat, the better they taste.

Crime was non-existent in Marystown. Nobody locked their front door or even took their car keys out of the ignition. The only known offences were being drunk in charge of something and killing something without the right permit. A traveling magistrate came through once a month and heard cases in the Town Hall, the local RCMP corporal acting as prosecutor. I say "local": this poor man was responsible, with the aid of two constables, for all law enforcement on the entire Burin Peninsular.

I came before the traveling magistrate myself. I had been driving back from St. John's one day in winter and had collided head on with an empty dump truck. This occurred on the crest of a small hill where the road for me curved to the right but for the truck curved to the left. The truck had been cutting the corner. Nobody was hurt but my car was wrecked. I had been on my own but the truck driver had had a passenger. The RCMP corporal talked to all three of us, about three days after the accident, and decided to charge me with dangerous driving. I went back to St. John's, paid for an hour of legal advice, and elected to defend myself. The corporal was taken aback by this, especially when I produced a graphic representation of the scene of the accident, complete with a model and toy vehicles. The audience was electrified, the more so when the magistrate threw out the charge. I knew I was in the right but I hadn't been at all sure that I would win, although my hopes had definitely been raised when I entered the Town Hall and recognized the magistrate as the man to whom, two days

before, I had demonstrated how to break into a car. This encounter had occurred in the parking lot of a diner on the highway to St. John's, where the legal eagle had accidentally locked his car with the keys still inside.

In early 1968, we started to build our first ship, incongruously designated Hull # 3, and to be christened the "Atlantic Carol". All went well. Our workforce was now trained and had been tested in the repair business. We even managed to stay on both the budget and the schedule. The only hiccup involved the fitting of the Kort nozzle that would shroud the propeller. Our Hull Superintendent, a Geordie from Tyneside, stomped into my office and announced that it could not be done, the tolerances shown on the drawings were impossible to achieve. This seemed unlikely to me. Apart from anything else, George T. Davie had already built two ships of this design, the ones that should have been our Hulls 1 and 2.

The "Atlantic Carol" on the lift, ready for launching

I told him so and he responded that if I wanted the Kort nozzle fitted I would have to do it myself. I was not at all sure that my Lithgow training adequately qualified me for this task but, nothing ventured, nothing gained, so I donned my hard hat, went down to the shop and did it myself. The troops were most impressed – I was fairly amazed myself – and the Hull Superintendent went home to the U.K. soon afterwards. And the nozzle did not fall off, clash with the propeller, cause terrible vibration or anything else.

I only had a two-year contract with Newfoundland Marine Works and in late 1968 I had to consider whether to renew it or to move on. I was enjoying myself, but there could be no doubt that, if I was going to have a career in shipbuilding, this was just one stage in it. I was being paid $8,000 a year, Canadian, at a time when the Canadian dollar was essentially on a par with the U.S. dollar. This was twice what I had been getting at Lithgows, but I had already worked out that the grass was much greener in the U.S.

So I elected to go. I told my employer and fired off a resume to all the major U.S. shipbuilders and all the major U.S. firms of consulting naval architects. Two days later I received a phone call from Premier Smallwood himself, asking me to reconsider. This was ego-boosting but my mind was made up.

Most of the companies to whom I offered my services showed almost total indifference. Who could blame them? The good news was that one of the few positive responses came from the New York firm of John J. McMullen Associates, Inc. I flew down to New York, was interviewed by JJMA's Chief Naval Architect, George Knight, and went to a Jets game at Shea Stadium. New York City, I concluded, would be OK.

I had only been back in Newfoundland a few days when JJMA offered me a job, at what seemed to me to be a very attractive salary - $14,000, 75% more than I was then getting. I accepted immediately and promptly visited the U.S. Consulate in St. John's, to start the process of getting a green card.

In those happy days before the Department of Homeland Security was even dreamt of, legal residents of the U.S. and Canada were free to cross the border at any time and for any reason. So, in December 1968, at the end of my first decade in shipbuilding, I left Marystown with all my worldly possessions in the back of the car. I crossed the border at Calais, Maine, at 3 a.m. on Christmas Eve. The rain was torrential. There was nobody on the Canadian side of the border. On the U.S. side, an Immigration officer slid back his window and asked me where I was going. "New York", I said. "Merry Christmas", he replied and slammed his window shut.

Chapter 6

NEW YORK CITY: A SLIGHT CULTURAL SHIFT

In the 1960s, the center of gravity of the U.S. maritime industry was in downtown New York City. The exact location depends on your perspective: many would pick the bar of the Whitehall Club, on the top floor of 17 Battery Place, the most southwesterly office building on the island of Manhattan.

John J. McMullen Associates, Inc., better known just as JJMA, was in 17 Battery Place, in uninspiring offices in what is really a pretty uninspiring building, despite its unique location. JJMA today is at the top of the heap of U.S. firms of consulting naval architects – has been for many years – and at least 80% of its business is in the defense sector, although its identity is now submerged in that of a faceless and unpronounceable government support contractor. Back then it was 100% commercial. Today, JJMA has offices all around the country, carefully located close to the naval shipbuilders and other key installations. Back then, the New York office was the only one in the U.S., but we had sister companies in Hamburg and Madrid.

The company was bursting with work when I joined it, primarily because the shipping industry had just discovered the container, and JJMA, together with arch-rival J. J. Henry, Inc., or JJH, was busy designing a whole new generation of ships.

I have never had the nerve to ask George Knight if he really thought when he hired me that he was getting a top-flight naval architect. He certainly wasn't.

The first task he gave me was to incline a ship at Maryland Shipbuilding, in Baltimore. I had never done an inclining before but it's not difficult if you follow the procedure, so that part of the trip went without incident. It was interesting to see Baltimore before Rouse reworked it: I remember thinking that this was a city I had no interest in returning to, although it's a great place to live nowadays. The exciting part of this trip was when I stopped at a toll booth on I-95, in the middle of rural Maryland: the toll-taker took my money and then said "Do you know that there are flames coming from under your hood?" Fortunately, the fire was easily extinguished without any significant damage to either personal or state property.

My first major job at JJMA was as Assistant Project Manager for the design of the "Euroliner" class of high-speed, gas-turbine-powered, containerships for Seatrain Lines, to be built in Europe. I probably survived this assignment because most of the important decisions had been made before I came on board. I think that my major contribution to this project was writing the specification, which was, of course, based

on the specification of a similar ship and which was also heavily edited by both the Project Manager and the client.

GTS "Euroliner"

The four Euroliners were, however, remarkable ships. Not only were they gas-turbine-powered, which made them unique, but they also had numerous imaginative features designed to make them more efficient than conventional cargo liners, resulting in a smaller-than-usual crew. Although the oil price increases of the 1970s destroyed their economics, they nevertheless represented a huge step forward in the design of cargo ships. I'll happily take all the credit for designing them, even though my contribution was minimal.

The first time that George Knight gave me something to do on my own, however, I quickly demonstrated my lack of expertise in a purely technical role. This was the design of some feeder ships for United States Lines, to be built in a Spanish shipyard. I was hopeless. No clue at all. The project was turned over to a Spanish-speaking naval architect and I was reduced to being Assistant Project Manager again. I visualize George staring out of his office window and wondering what he was going to do with Colton.


Todd's restricted building ways

Fortunately for me, at just that moment, Todd Shipyards asked JJMA to review its plans for modifying its San Pedro shipyard to allow it to build large commercial ships. This was a yard that had been going since 1917 and its construction record was a mix of naval and commercial ships. In 1969 it was in the middle of building a batch of seven frigates for the Navy, but was facing the need

to switch to the commercial market. The yard built ships on inclined ways that were very close together and were served by fixed gantries, as shown in the accompanying picture. They didn't want to be limited to the relatively small ships that could be built on these ways and had developed a plan for reconstructing the yard to allow it to build Panamax-sized ships.

George Knight lobbed this particular assignment to me and I was all over it. I visited the yard, researched the layouts and capabilities of similar shipbuilders around the world, and wrote my first consulting report. My report succinctly told Todd why their plan was all wrong and what they ought to do instead.

The Todd management seemed to be a bit taken aback by this. I think that they thought that they collectively knew all that there was to know about the shipbuilding industry and they had almost certainly been looking to JJMA for some form of rubber-stamp endorsement of their plan from a credible third party, not a lecture on how to lay out and equip a modern shipyard from a 30-year-old Brit who had only just arrived in the U.S.

Amazingly, they took at least part of my advice and saved their money. The cure did not, however, prove to be a long-term one. Ten years later they came up with a similarly hare-brained scheme for investing much larger amounts of their stockholders' money in a facility that was leased from the Port of Los Angeles and it essentially put them out of business. More of that in a later chapter.

I cannot resist inserting an item of trivia here. In the movie "Pretty Woman", which everyone must have seen several times by now, the character played by Richard Gere is in Los Angeles to close on a hostile takeover of a shipbuilding company. Not only do the descriptions of this shipbuilder sound a lot like Todd but there are scenes with aerial views of the San Pedro yard, and the movie was made just when Todd was, in fact, going bust. It's not often that a shipyard makes it into the movies, although one could wish that it had been in a happier scenario.

From my point of view, and JJMA's too, it was now clear that my expertise lay in the mechanics of the shipbuilding business rather than in the design of ships themselves. The problem was, how much of this type of work was out there?

My experience with Todd was my first with the management of a U.S. shipyard and it was at this point that I started tracking the doings of all the major U.S. yards, building a filing system, later transformed into a data base, which would be the foundation for a lot of future consulting work. And Todd Shipyards would be a frequent player on my particular stage.

Becoming a New Yorker

Meanwhile, I had become a New Yorker. Everybody at JJMA encouraged me to look for an apartment in the outer boroughs, because Manhattan was so expensive, but I knew that I had to be in the City itself. It certainly was expensive, but I rented a furnished studio near the United Nations and explored the city on weekends until I tripped over a part of town that was undergoing "urban renewal". This meant the conversion of the apartment buildings on the corners of the blocks for rental to mixed-income tenants and the provision of low-interest loans for owner-occupier renovation of the brownstones on the cross streets. One Sunday afternoon I discovered a frustrated owner-occupier named Irv Schwartz in the middle of his renovation of 55 West 94th Street and became his tenant.

I lived in that one-bedroom apartment on the top floor for almost all my time in New York. Irv and Elaine Schwartz are still there. They were great landlords and it was a great apartment. The only negative thing about it was that many of the girls that one met in the bars on Manhattan's East Side regarded the West Side as distinctly dubious territory and 94th Street as being much, much, too far north. But I had an apartment of my own, with hardwood floors, bare brick walls and a separate bedroom, even if my furniture was a bit of a mixed bag and my book shelves were unfinished planks sitting on wall brackets. I considered this arrangement to be streets ahead of the miserable little studios or shared apartments in the ticky-tacky boxes of the Upper East Side where most of my Brit friends lived. And my place was rent-controlled: in real terms, it got cheaper every year.

Besides, I liked the Upper West Side. It was a real melting-pot, with people of a bewildering array of ethnicities, educational levels and income levels. It was much more interesting than the white-bread canyons of the East Seventies and Eighties.

Despite the pleasures of the Upper West Side before it became fashionable and expensive, social life was mostly on the Upper East Side. The expatriate Brit crowd hung out at a relatively small number of bars – I recall with particular affection The Mad Hatter and Drake's Drum – where we specialized in treating the locals with disdain. We must have been a somewhat antisocial mob, although obviously we didn't think so. These were the 1970s, however, the era of singles bars and everything that went with that concept, and we were not complaining. Nowadays, I cannot pass a branch of the T.G.I. Friday's chain without recalling the fun we had back then at the original Friday's, on First Avenue at 63rd Street. It is frequently claimed that Friday's was the first singles bar, but I have no doubt that it was preceded by Malachy's, on Third Avenue between 63rd and 64th, strategically located close to the all-female Barbizon Hotel, where the outrageous Malachy McCourt held, as it were, court.

I lived in the City for ten years and only had one brush with the crime for which New York is so unjustly famous. This was in my first month. I had gone to the supermarket on the corner of the block to get some basic necessities – tonic and limes, if I remember rightly. It was just a few minutes before the store closed at 9 p.m. I was in the process of checking out, when a young black guy with a brown paper bag came up behind the cashier and said to her "Put the money in the bag, babe". Since the store's employees were all black, I assumed that this was some management person, clearing the cash registers at closing time, so I said (sounding like a character out of a Monty Python skit) "I say, would you mind terribly waiting while she finishes ringing up my purchases?" A hush fell. The cashier and the "manager" looked me as at a deranged person. Then I felt a pressure in the small of my back, turned around, and found myself face to face with a man with a gun. Keeping my head with impeccable sang-froid, I then said "Oh I beg your pardon, I misunderstood. Do carry on, please." Which they did, and left, locking us all in the store on their way out. Afterwards, I was more alarmed by the hysteria displayed by the other people in the store, who appeared to think that I had nearly got them all killed. I knew that living in New York was going to be interesting.

Another advantage of living on the Upper West Side was its closeness to Columbia University. I had decided, on arriving in New York, that I should take advantage of the amazing array of educational opportunities that were available to me. I was torn between an MBA and an MS in Industrial Engineering. I was also, snobbishly, determined that it had to be at a school whose name would be recognized outside the U.S. I decided that it was going to be hard to do an MBA in my spare time and Industrial Engineering appealed to me, so I enrolled at Columbia, structuring a program that avoided the more mundane aspects of industrial engineering, such as time-and-motion study, and included a couple of courses at Columbia's Business School.

My faculty advisor was another of the unusual individuals that I have had the good fortune to trip over during my career. Seymour Melman was the great Cold War proponent of the economic advantages of converting defense facilities to the civilian economy, and had written half a shelf of books on the subject. An electrifying speaker, he really challenged his students and frequently got into blazing rows with them. But you didn't have to agree with Professor Melman to appreciate him and the classroom rows were all part of his teaching method. He was ahead of his time, however, not only in that we could have benefited from his forceful arguments a few years later, when the Base Realignment and Closing (BRAC) legislation was passed and idiot politicians started trying to block base closings. He would also have been a dynamite guest on today's talk shows.

Going to Columbia at nights in 1969 had another interesting dimension. This was the period of anti-war rioting. For a good part of that year, the University was under student control, the police patrolled the streets of Morningside Heights and the campus was one huge protest meeting. The Engineering School was boarded up and the faculty wanted to give us all Pass grades for that semester and skip ahead until the fuss had died down. But most of my co-students, like me, had to get letter grades if we were going to be able to recover our tuition expenses from our employers: we insisted on classes going ahead as scheduled and we got them.

The Columbia experience was interesting in several ways. It was refreshing to be in classes with people from other industries and with students from around the world. I think that this gave me a much broader perspective than I had had before. I also noticed that the courses that I took at the Business School were much more demanding than those that I took at the Engineering School. I was somewhat relieved that I had elected to earn an MS rather than an MBA.

It took me three years to complete nine of the ten courses required to graduate. The tenth was a research thesis and by 1972 I was so busy at JJMA, and doing so much travelling, that I never got around to it and ended up with a record that included nine As and an F. Seven years later, after I had left JJMA and moved to Texas, I called Professor Melman and asked him if it was too late to finish my degree. No problem. I wrote my research thesis, something to do with productivity in shipbuilding, and they mailed me my degree. Columbia scored a lot of points with me for that flexibility.

Back to Canada

George Knight solved the problem of what to do with Colton by sending me back to Canada, though not, fortunately, for good. (Not that I don't love Canada and everything Canadian, I hasten to add.) In early 1970, I was assigned as Project Manager for the construction of four power-generating barges. The hulls and superstructures of these barges were to be built by Marine Industries Ltée, (MIL), in their shipyard in Tracy, about 40 miles downstream from Montreal, while each barge's eight gas turbines were to be installed by Newport News Shipbuilding. JJMA had designed these barges, which were, I think, the world's first purpose-built power-generating barges. JJMA's customer, and the owner of the barges, was General Electric, whose gas turbines would constitute the power. The end-user was going to be Consolidated Edison of New York, known as Con Ed, who intended them to sit in Gowanus Bay, in Brooklyn, and be available in the dead of winter or the heat of summer to provide additional power to New York City at the peaks of the demand cycle.

This was an assignment that was well within my capability but not without its own form of entertainment. I arrived in Tracy in the week that Quebec separatists, who had earlier kidnapped a British diplomat, kidnapped (and later murdered) the Minister of Justice of Quebec. Suddenly the province became an armed camp, with tanks in the streets. I went about my job as if nothing was happening but the atmosphere was taut, to put it mildly.

MIL was a good mid-sized yard, started at the beginning of the century and with a long track record of building a wide variety of vessels. While I was there, they were also building two "Iroquois"-class destroyers for the Canadian Navy and two deep-sea trawlers. My only real problem with their conduct of my project was getting them to take the welding requirements seriously. They kept saying "It's just a barge" and I kept saying "It's not just a barge, it's a floating foundation", only there was another f-word that appeared in both those statements. We had endless arguments about this and GE sent in a former President of the American Welding Society to back me up. Finally the obstinate Frenchmen got the message, started assigning welders coming off the destroyer project and the barges got built, on budget and on schedule. MIL was a good yard: it's a shame that it's gone now, but over the years I must have said that about a hundred shipyards.

My six months or so at MIL also introduced me to the concept of shipyard hospitality. (That was 1970, after all: it's been very different for a long time now.) Every Friday, a bottle of Tanqueray gin mysteriously showed up in one of my desk drawers. The first time it happened, I agonized for a while before deciding to say nothing, hoping it was a one-time thing. When it happened again the next Friday, I took MIL's Project Manager, a delightful guy named Denis Dumas, to one side and asked him to stop it. "What bottle?" he replied, all innocence. "I don't know what you're talking about." So I gave up. Nothing was ever said by any of the MIL guys either, and there was never any suggestion of a quid pro quo.

The other feature of life at MIL that was bad for one's liver was lunchtime. The shipyard's Director of Ship Repair – a Scotsman, naturellement – held court every day at the corner table in the bar of the local hotel and picked up the tab every day for any of the shipyard's customers who joined him, however long they stayed and whatever they consumed. I managed to keep my attendance down to one or two days a week. I don't know how our host survived.

I even played some rugby during my year in Tracy, and it was the most fun of my long but totally undistinguished rugby career. I knew some of the guys at Montreal Wanderers Rugby Club and I could have played with them but I was persuaded to play for the local club in Tracy. Le Club Rugby de Tracy was run by a fortyish Brit, who played loose-head prop. The hooker was a fortyish South African. As a thirtyish

Brit who was a tight-head prop, we made a fearsome, if slow, front row. (Note to non-rugby players: these three positions with the outlandish names are the front three of the forward squad on a rugby team, roughly comparable to the center and the guards on the offensive squad of a football team.)

All the other players were Quebecois of college age. There was no training or practice of any kind. The selection procedure was simple: the first 12 players to show up at the pub where we met at lunchtime every Saturday were on the team, plus the three oldsters. We played in the Quebec Intermediate League, which consisted mostly of the second-string teams of the major clubs in and around Montreal and Ottawa. Our strategy was simple. The three old men won possession of the ball from almost every scrum and line-out and fed it to the kids, who would then run like mad in all directions, shouting hysterically at each other in French, and occasionally scoring. While this was going on, the three of us would just stand and watch until it was time, once again, for us to do our bit. All our signals and instructions were in French but most of them were bogus, because we didn't actually have any set plays.

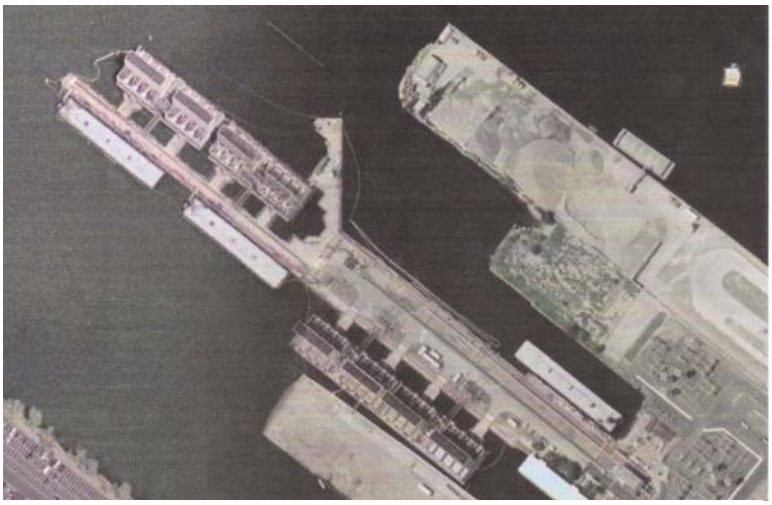
We would have been easy for an experienced team to beat, but we didn't play against experienced teams and we won every game of the regular season. We were cheated out of the league championship, however, by one of the Anglo clubs in Montreal, which packed its second team with first-string players for their play-off game with us. I never enjoyed rugby more.

The ship I was not allowed to look at

After the barges were delivered by MIL, they were towed to Newport News, where I tripped over a new facet of the U.S. shipbuilding scene. The four barges were moored at Pier 2 in Newport News Shipbuilding's huge shipyard, so that their gas turbines could be installed and tested, and the cladding hung on the surrounding structure. Next door, at Pier 1, was a largish gray ship. Being a merchant shipbuilder through and through, with zero knowledge of anything naval and even less interest, I didn't give it a second thought. It was baffling, therefore, to be told that, not having the necessary security clearance, I must not look at the gray ship. In fact, I must face north at all times. Useless to point out that, even if I were to study this secret weapon closely, I wouldn't know what I was looking at. Or to observe that, if I was really interested, I could rent a small boat and take pictures of it from the water. I later found out that the ship was USS "Mount Whitney" (LCC 22) a command-and-control ship: there is absolutely nothing about the external appearance

of this ship that could be described as secret. Almost forty years later, with the Cold War 20 years over, it still seems that many of the Department of Defense's security precautions are infinitely stupid.

The barges were completed satisfactorily and towed to Brooklyn. Far from being used for peak-shaving, they went into full-time service almost immediately, and they are still going, 37 years later. I have been unable to find a good photograph of them but you can see them from the air, with their dedicated fuel barges, in Google's satellite view.



Con Ed's power barges from the air

Returning to New York in December 1970, I found that JJMA had moved. John McMullen had committed the company to leasing the whole of the 30th floor of the north tower of the World Trade Center, but construction was behind schedule and we had been forced to move to temporary quarters at 110 Wall Street, almost at the East River. These were very cramped, to put it mildly, and it was a little disconcerting to discover that no space had been provided for me and that all my stuff, such as there was, was in storage. Did I not work here anymore? My feeling of unease was not much improved when George Knight told me to take an extended Christmas vacation and to report back in January.

Chapter 7

NEW YORK CITY: TRANSPORTATION SCIENCES

Reporting back to JJMA in January 1971, I found that I still had a job but that George Knight had solved his what-to-do-with-Colton problem by transferring me into the company's newest entity, the grandly named Transportation Sciences Division.

The name "Transportation Sciences" – later on we changed it to "Transportation Consulting" – was intended to reflect the reality that was being brought home to us by the invention of container shipping, that a truly efficient transportation system involved multiple modes and that they all needed to be integrated and optimized before any individual element, such as the ship, could be designed. The driving force behind this was John McMullen himself, who never passed up a chance to use the phrases "door-to-door" and "total transportation". So far, I had had zero exposure to Doctor John, or Mac, by both of which names he was known around the office, but I followed his logic and I embraced the new challenges that it implied enthusiastically.

John McMullen himself was vigorously putting his money where his mouth was. In 1969, the old-line shipping company, United States Lines, had been bought by Walter Kidde, a company best known for making fire extinguishers but, at that time in the process of becoming a wildly diversified conglomerate, under the direction of a megalomaniac called Fred Sullivan. While driving through the acquisition, however, Kidde had discovered that United States Lines' single largest stockholder, one John McMullen, wasn't interested in selling. Not, that is, unless he got to run the company. So Mac was now Chairman of United States Lines, which he was dragging into the container age, with technical support from JJMA. In his absence, the day-to-day management of JJMA was in the hands of Joe Cuneo, a Webb naval architect and Harvard MBA.

The task of getting JJMA into the business of designing total transportation systems was assigned to another Webb naval architect and Harvard MBA, the eccentric and totally exasperating Don Brideweser. Don assembled a group of six people, all of whom had bachelor's degrees in a marine discipline - from either a school of naval architecture or a maritime academy - and master's degrees in a business discipline - such as business administration, economics, or, in my case, industrial engineering.

Don Brideweser was an interesting person to work with. In addition to his B.S. in naval architecture from Webb Institute and his M.B.A. from Harvard, he had an M.S. in nuclear engineering from M.I.T. Over-educated, he was a brilliant ideas person but a hopeless manager. He would arrive at work between 10 and 11 am and rarely went home before midnight, a schedule that did not sit well with the rest of the

department, especially as he regarded anyone who went home before he did as a slacker, even if they had come in at seven. Some nights he never made it home and his 6'-5" frame would be found the next morning on the extra-long table in the print room used to receive blue-line drawings from the copying machine. This was apparently the only spot in the office where he could stretch out, although why it was preferable to the floor remains a mystery. Fear of rats, maybe.

Don was an expert at coming up with great ideas at the last moment, with the inevitable result that we worked round the clock to incorporate the great idea, over-spent the budget, and delivered late. He drove us all crazy but he was definitely smart.

Fortunately, the department was something of a loss leader for the rest of JJMA and at that time was not expected to make a profit. Our fleet planning studies, for example, had resulted in tens of millions of dollars worth of work for George Knight's side of the business, which was, after all, the company's core activity.

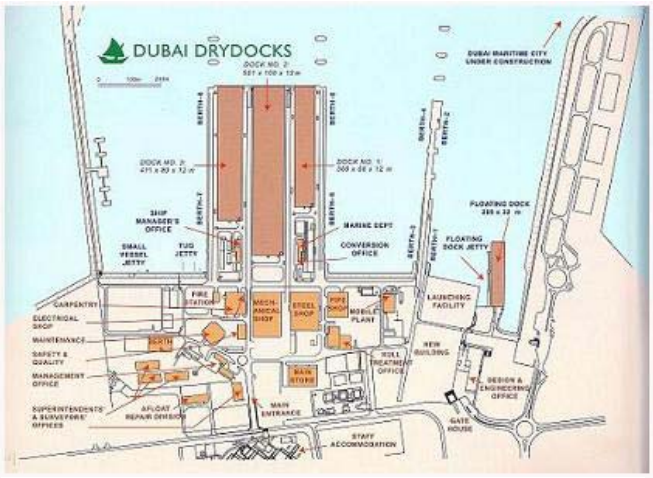
Early in 1972, we moved into our new space on the 30th floor of the North Tower of the World Trade Center. The Transportation Sciences group was assigned the northwest quadrant of the space and I had a proper office at last, with a spectacular view to the west, over the Hudson River and New Jersey. Later on, I got to move to the corner office, with a view over Manhattan as well as New Jersey. I never had an office like that again, but I was hardly ever there to enjoy the view.

In the group's early days, we undertook some large and significant projects, including studies for OPEC, Massey-Ferguson and RENFE (the Spanish national railroads), but my assignment was to generate work for shipyards. Fortunately for me, who was not at all sure how to go about this, my first project was handed to me by Mac.

Following the embargo of 1967, the Arab states were awash in oil money and interested in investing it in downstream activities such as tanker fleets. OAPEC, the Organization of Arab Petroleum Exporting Countries, was already a client of JJMA: we had done a fleet planning study for them and George Knight's division had not only designed the tankers but was supervising their construction. Now OAPEC built its own ship repair yard, known as ASRY, in Bahrain. The Ruler of Dubai had wanted this yard to be in his emirate and when he lost that argument, he decided to build his own. John McMullen, who didn't think much of ASRY, aided and abetted him in this and proposed to invest his own money in the project. JJMA was hired as technical advisors to the Dubai Dry Dock Company.

So my first shipyard project in the new Transportation Sciences Division was to evaluate the feasibility of developing a major ship repair facility in Dubai and to produce a conceptual design for it.

This was a wonderful opportunity and when I look back, I think of it as, in many ways, my most significant project. The feasibility study completed, we went on to design the yard itself, the largest ship repair yard in the world, then and now, with three graving docks sized for 1,000,000-dwt, 750,000-dwt and 500,000-dwt tankers. (In the early 1970s, the maritime industry confidently expected the size of tankers to reach a million tons.) To help with this project, Mac had just bought an A/E firm and moved it into the northeast quadrant of our WTC offices.



Dubai Drydocks

Moving on from the conceptual design, we then conducted an international competition for the yard's construction, and promptly tripped over some classic Middle Eastern politics. We selected the wrong contractor. The one we picked was a very big British company with impeccable credentials, Taylor Woodrow. It was immediately pointed out to us that we should have picked another big British company with impeccable credentials, Richard Costain. Apparently Costain got first whack at all big construction projects in Dubai. We compromised by bringing the two companies together into a joint venture for the purpose of building our shipyard.

No sooner had we picked ourselves up from this embarrassment than we discovered that we weren't going to get to do any more design work. Apparently a British engineering firm called Sir William Halcrow & Partners got first whack at designing all big construction projects in Dubai. Suddenly JJMA wasn't needed anymore.

All these problems were tied back to a very smooth operator named Mahdi Al-Tajir, who, as the head of Dubai Customs, was the Ruler's right hand, and who reportedly got a piece of just about every deal done in Dubai. Whether this was true or not, he now appears at #22 on the London Times' list of the world's richest people, with a net worth of close to $5 billion.

The National Shipbuilding Research Program

While working on the Dubai project, I was also working on a domestic project of tremendous significance, then and now. In 1970, the Merchant Marine Act had been amended in several ways, all with the general goal of strengthening the industry. One of the elements of this was the introduction of a research program, to be funded 50/50 by the federal government and the shipbuilding industry, designed to make the

industry more efficient. The U.S. Maritime Administration – known as MARAD – was responsible and had the budget for this effort, and Bath Iron Works – known as BIW – was what we would now call MARAD's "support contractor". Within BIW's organization, this project was the responsibility of its VP of Business Development, Rick Thorpe, another over-educated Webby of the same era as Cuneo and Brideweser, but Rick had no staff, so he brought in JJMA as a subcontractor and got me. Rick and I got along famously, spending almost as much time solving the many problems of the maritime industry in New York City restaurants as working on the project. With the support of Jack Garvey and Bob Schaffran at MARAD, we structured the outline of what we called the "Ship Producibility Program" and held a very well attended industry conference in Annapolis to get everyone on board. The net result of all this was the National Shipbuilding Research Program, or NSRP, that continues today.

Life in New York City

Living in Manhattan never palled and I would live there again today if I could afford it. The number of things to do is endless. One rule I made for myself early on and kept to for the whole ten years was that I would take in at least one form of live entertainment every week. This was not hard, and not particularly expensive, either, since the range of possibilities included not only off-off-Broadway but also such informal entertainments as jazz concerts in bars.

When I moved to New York, one of my first acts was to find a rugby club. There had to be one somewhere, if I could just track it down. The sports desk at the New York Times pointed me to Gaelic Park, on 236th Street, off Broadway, in the far northern reaches of the Bronx. I thought that this was distinctly unlikely and that the New York Times chap was confusing his lesser-known sports, but I gave it a shot one Saturday, and, lo and behold, there was indeed rugby in Gaelic Park. I sat in the stand and watched what I later discovered to be New York Rugby Club playing Yale University, followed by Manhattan Rugby Club playing the Toronto Scottish.

When the second game finished, I approached a group of players and asked them, as a group, how one got to join one of these clubs. One of the group promptly said "You come with me", grabbed me by the arm and marched me away. Ray Canning had been the only New York player in a group of Manhattan players and he was not about to let a new recruit join the wrong club. Of course, at that point, he didn't know that I was never going to be one of the club's first-string players.

It was at this time – 1971/72 – that rugby in the U.S. started getting organized. One of the side-effects of the anti-establishment uprisings of students on campuses nationwide was a rejection of regimented varsity sports in favor of unregimented club

sports. A few years previously, rugby in the New York area had been played by four open clubs and four colleges. Suddenly every college, however small, had a rugby team and, a few years later, the graduates of these colleges were getting together and starting new clubs. The first problem with this explosion was the lack of coaches, referees and administrators. It was chaotic for several years, but out of the chaos emerged the United States Rugby Union, the four territorial unions and the 40+ regional unions that now run the game.

One of the breakthrough events came in December 1970, when the Fijian national side scheduled a game against a New York All-Star side while on their way home from a tour of Wales. This would be the first game of rugby ever played by a recognized national side in the United States. (Fiji may be a very small country but it is a rugby powerhouse.) On a freezing cold night in New York's bleak Downing Stadium, the New Yorkers beat Fiji 6-3 and the rest of the rugby world sat up and took notice. The following year, the New Zealand national side, the famous "All Blacks", played (and won) three games in the Eastern United States following a highly successful tour of the British Isles. The U.S. was suddenly on the rugby map.

I, however, found myself on the New Zealand map. Not long after this, touring sides started staying in hotels, but in 1971 the All Blacks were spread around a bunch of Manhattan apartments. I helped to organize their visit for the New York Rugby Union and had their manager in my apartment. From that point on, for several years, my life was periodically disrupted by New Zealanders, most of whom called me for the first time from Kennedy Airport. "You don't know me", they would say, "but so-and-so said that if I was ever in New York, I should look you up." Short pause. "Any chance of a bed?" As it happens, New Zealand is one of the few countries that I have never visited. One of these years, I am going to go there and, when I do, I reckon that, if life is at all fair, I ought to be able to stay for at least a year without needing a hotel room.

There was another New Zealand dimension to my existence at this time. In 1970, John McMullen had been at a reception at the U.S. Embassy in Rome and had met two New Zealanders, one of them the daughter of New Zealand's Ambassador to Italy. These two, Rosemary Elliott and Rosalind Kirkcaldy, were doing the post-school tour of the world that seems to be almost compulsory for so many New Zealanders, and Doctor John rashly assured them of employment if they ever got to New York. Naturally, they held him to that promise and came to work for JJMA. I found them to be excellent social company – Rosemary is still the only woman in whose company I have ever fallen off a bar stool – and I enrolled their assistance with entertaining the All Blacks. Two years later, Rosemary's younger sister, Jean, and her round-the-world companion, Deborah Wilson, also came through New York, also

worked for JJMA, and also became fixtures on the social scene. In that period, I became and remain firm friends with a whole network of New Zealanders because of these four and the number that I count as friends because of them and that All Blacks tour keeps on growing.

Greece

In the meantime, my work involved more and more travel, some of it quite enjoyable.

I spent the summer of 1972 in the Greek islands and I still swear that I did not drag the job out unnecessarily. The assignment was at Neorion Shipyards, on the island of Syros, the central island of the Cyclades group, but not a major tourist destination. A well-known London Greek shipping company, N. J. Goulandris, had bought the shipyard, which was a repair yard for fishing boats, and was using a Greek government loan to develop it as a full-service repair facility for ships up to Panamax size. Unfortunately, they had spent all the money and only done about half the work. My assignment was (a) to find out why and (b) to develop a plan and a budget for completion.

Neorion Shipyard

The port-city of Ermoupolis, on Syros, reaches up a hillside from a crescent-shaped harbor, with the one hotel on one horn of the crescent and the shipyard on the other. Around the harbor, every second establishment is a taverna. I could get up in the morning and walk out the back door of the hotel for a swim in the Aegean. Then a walk around the harbor, always breakfasting at a different place, preceded a day at the shipyard. The return trip, at the end of the day, was even more enjoyable, because there was no need to rush. It was also rather nice to be treated everywhere as a VIP: I found out that everyone knew that I was "the American who has come to fix the mess at the shipyard".

The mess at the shipyard turned out to be more a matter of incompetence and inexperience than of corruption. New project managers were appointed, more money was found, the work was finished and the expanded shipyard flourished.

This was undoubtedly the toughest assignment of my career. Syros is a beautiful island and Ermoupolis a beautiful city. The lack of tourists was a strong point in its favor. The only odd thing was that the shower heads in the hotel bathrooms were mounted at about waist height. No one could tell me why and I still don't get it.

Portland

The Dubai and Neorion projects were great preparation for my next one. The Port of Portland – Oregon, not Maine – operated a ship repair yard on Swan Island, where Kaiser had built T-2 tankers during WWII. The yard was unusually structured. The Port was the owner and operator. A shipping company could reserve space on one of the yard's three floating docks or at one of its wet berths, and then invite any or all of the three local repair firms to bid on the work. These three firms each had a cadre of key employees but otherwise drew from a common labor pool. This curious arrangement seemed to work, after a fashion, but nobody liked it much.

Portland Ship Repair Yard

The Port and its contractors could see the potential of the Alaskan oil trade. Although the pipeline had not yet been built, Alaskan oil was already moving by tanker to the refineries on the West Coast and the industry was planning the construction of tankers that were much too big for the Port's largest dock. There was space in the yard for expansion but outside help was clearly needed. I managed to sell the Port and its Shipyard Management Committee, which included the three contractors, on JJMA's expertise and we were hired, initially to undertake the necessary feasibility study and to develop the conceptual design, and later to assist with the acquisition of the new large floating dock.

This project went remarkably smoothly. Possibly the highlight was that the feasibility study supported the Port's issuance of $85 million in revenue bonds but the project only cost $68 million, leaving the Port with $17 million in cash. The trick to this wizardry was that the estimated cost included in the $85 million for the acquisition of the big dock was based on it being US-built: the actual dock was built in Japan.

This yard has not been as successful as it should have been. Two of the three contractors failed. The third changed owners at least twice and then bought the yard from the Port, but still couldn't make it and sold the big dock to the new yard in Freeport, Grand Bahama. There are several reasons for the yard's lack of success but this is not the place to dive into them.

Pascagoula

At the end of 1973, a wholly new type of project popped up. In the early 1970s, JJMA had opened an office in Washington DC, for the express purpose of pursuing business with the Navy. A department designated 05P in the old NAVSHIPS – now called NAVSEA – was looking for help with a contract dispute the Navy was having with Ingalls Shipbuilding, in Pascagoula, Mississippi. This was more than just the usual contract claim: Ingalls was maintaining that problems caused by the Navy on one contract were having a ripple effect on all its other contracts, both naval and commercial. They said that the total impact was on the order of a billion dollars, an astonishing sum in those days. The Navy had dismissed the shipbuilder's claims but now it was a matter before the Armed Services Board of Contract Appeals, or ASBCA.

To dispute the shipbuilder's case, the Navy retained JJMA to analyze all the technical issues and Booz Allen to analyze all the production issues. Each firm sent a team of about 30 people to Pascagoula. We were there for most of 1974, working 60 hours a week. I was JJMA's Project Manager and would have preferred to be doing the production analysis, but we cannot always have what we want.

The case itself was endlessly fascinating. It involved the inter-actions between contracts for the construction of destroyers, assault ships, nuclear-powered attack submarines, ammunition ships, commercial cargo ships and product carriers. We could have dragged this out for ever, but the effort was wound up in the fall and the two parties eventually reached a negotiated settlement.

Working on this project was an interesting experience, to put it mildly. It was the only time in my career that I was paid overtime, so 1974 was a get-ahead year economically, especially as we had also negotiated a per diem rate for expenses that gave us each quite a bit more than we really needed for rent, meals, car, etc. It was also the first time in my ten years at JJMA that I had to price a project and I was somewhat teed off to discover that non-Americans working for JJMA, including me, were paid noticeably less than the Americans: this was something that got rectified later that year. And it was also my first experience of the American South, only ten years after passage of the Civil Rights Act.

One of the reasons why this project was particularly satisfying was that the JJMA team got on so well together, largely thanks to the technical team leaders – Norm Mashin and Lasalle Nolin – but also to its project administrator, Spiros Petropoulos, who turned out to be a brilliant deal maker and social director, getting us all apartments in the same complex and other arrangements that were similarly congenial. We planned to build on this project with a similar one for the Navy's dispute with Newport News, but in that case the Navy elected to use Booz Allen exclusively. We did help the Navy with its much smaller dispute with Lockheed Shipbuilding and Bruce Southern and I spent a few entertaining weeks in Seattle, where, in a break with the Navy's standard procedure of fighting claims by throwing hordes of contractors at them, we solved the problem by writing a manual for common-sense claims resolution.

I fell afoul of the law while in Pascagoula. Returning one evening from a merry session at the Tiki Restaurant in Gautier, I was suddenly aware of flashing blue lights in my rear-view mirror. I pulled over and so did they. One of the largest state troopers imaginable loomed up beside me. Smokey-the-bear hat, boots, the works: I seem to remember him wearing shades, but as it was 1 a.m., that's probably my imagination. Winding my window down and my British accent up, I said "Good evening, constable. What seems to be the problem?" A long silence, then "Well, shee-ee-ee-ee-i-i-i-t! A f---ing limey!" followed by five minutes about the good times he had had in England during dubya-dubya-too and instructions to drive more carefully the rest of the way home. I've pronounced that simple little four-letter word with seven syllables ever since.

Returning to New York, I found that there was another job to be done for John McMullen. This involved that other strong personality of the shipbuilding world, George Steinbrenner. McMullen was a major stockholder in the American Ship Building Company, known as AmShip, which was one of the two Steinbrenner family businesses, the other being Kinsman Transit. AmShip had acquired a repair yard in Tampa, closed its Great Lakes yards and moved its headquarter to Tampa.

The shipyard in Tampa

Two years later, Steinbrenner's management team came up with a plan to expand this yard to accommodate bigger ships and John McMullen, still the biggest stockholder,

sent me to take a look. I concluded that the objective was valid but that the physical plan was all wrong and doomed to disaster. Steinbrenner was furious – much yelling and screaming – and went ahead anyway, ignoring McMullen's objections. Living in Tampa, he took more interest in Tampa Shipyards than he had ever taken in AmShip, and, predictably, ran it in the same way that he ran the Yankees – changing General Managers every six months

It is ironic that, about 15 years later, when Tampa Shipyards went bankrupt, I was retained by Tampa Port Authority to help them find a new tenant. I recall going out to lunch with the Port Director one day and seeing The Boss's car – instantly recognizable from its Yankee insignia – parked in one of the restaurant's disabled parking spaces. Typical Steinbrenner behavior. The good news is that the Tampa yard is now reasonably successful.

The only positive thing about the relationship between John McMullen and George Steinbrenner was that McMullen was one of Steinbrenner's partners when he bought the Yankees in 1973. (It was John McMullen who famously said that "There is nothing quite as limited as being one of George Steinbrenner's limited partners.") McMullen had one of the owners' boxes at Yankee Stadium, to which we occasionally got to take clients. I have never been much of a baseball fan, but this was certainly a great way to spend an evening, and in 1977 I even got to go to a World Series game at Dodger Stadium.

At this time, there was a management change that would have a major impact on my career. Our Transportation Sciences Division had been leaderless for quite a while: each of the five Project Managers had basically been doing his own thing, virtually unsupervised, a situation which had both advantages and disadvantages. Now, suddenly, we had a new leader, who had come, ironically, from Ingalls Shipbuilding, with whom we had recently been fighting. His name was Ed Paden and he was very non-standard. He had served as an enlisted man in the Navy in Korea and then worked his way up the Litton Industries organization, ending up as the Ingalls Marketing Manager who had sold six gold-plated guided-missile destroyers to the Shah of Iran. The initial reaction in our group to his arrival was alarm, but the first thing he did was change the name to "Transportation Consulting" and the second was divide us into sections that reflected the way in which we were already informally organized. I became Director, Marine Facilities – i.e., shipyards, ports, and the like.

Ed quickly impressed us with his imagination and his willingness to go to bat for us – he seemed to be one of those people who always had to have some kind of private war going on – and we were eager to see where he would take us.

Chapter 8

NEW YORK CITY: IRAN AND THE MIDDLE EAST

Our new leader in JJMA's Transportation Consulting Division, Ed Paden, had only been there a few weeks before he went off to Tehran and he had only been in Tehran about two weeks when he sent for me to join him. And I had only been there about a week when he packed me off to Abadan, on the Persian Gulf, while he returned to New York. I spent most of 1975 in Iran and most of 1976 in and around the rest of the Middle East.

The original reason for heading to Iran was tied back to Ed's coup in selling six gold-plated guided-missile destroyers – DDGs – to the Iranian Navy. A major naval base was being built at Bandar Abbas and a part of this was going to be a training establishment for the crews of these new DDGs. Everything the Iranians did in those days was outsourced and Ed reckoned that he had both the contacts and the persuasive powers to get the contract for setting up and managing this training establishment. It soon became apparent that this was not going to happen, but there were other opportunities beckoning.

John McMullen had recently acquired one of the best known names in the U.S. shipping industry. Norton, Lilly was the oldest and largest shipping agency in the country and among its clients was Arya National Shipping Lines, the Iranian national shipping company. Like every shipping company then serving Iran, Arya had been having trouble with the inadequate facilities and incompetent operation of the Iranian ports, which were creating horrendous congestion, delays and demurrage costs. Arya and Norton, Lilly had created a joint-venture stevedoring company, called Arvand Stevedoring, to help with this, but it was not really doing much more than scraping the surface of the problem, which really lay with each port's management, which was part of an Iranian Government Department called the Ports and Shipping Organization. Mac had tasked Transportation Consulting with getting work out of this mess and I was, of course, the one who had to do it.

In addition, the Iranians were major users of international shipping and wanted to develop their own shipbuilding capability. They were actively seeking outside help with this. That was very much my kind of problem.

Doing business in Iran was quite a challenge. For starters, you had to have an agent. Our friends at Arya introduced us to a wealthy family, whose name is lost to me, but who had, among other things, the Coca Cola and Ford distributorships for the whole country. These folks were not short of a rial. We dealt mostly with the son but were occasionally invited to the father's house, which was a replica of the Petit Trianon at

Versailles. Extravagant in every sense, I can easily imagine that it did not survive the revolution, or maybe it is now a government office building.

We also received a lot of help in Tehran from a U.S. Navy Captain stationed at the Embassy, a great guy called Bob Harward. It was never clear to me what his real job was but he was certainly a wizard at opening doors and arranging meetings. It's tempting to assume that he was some kind of spook, but who knows. Of course the Ambassador at that time was Richard Helms, whose previous job had been Director of Central Intelligence, and the Embassy was well staffed with spooks.

In the early weeks in Tehran, I stayed at the Royal Tehran Hilton. There were only three decent hotels – the Hilton, the Sheraton and the Intercontinental – and they were all permanently overbooked. All the international flights from the West arrived at Tehran airport in the late evening and it was a stampede to get to the hotel. Having a reservation was only enough to get you in the door. Wads of cash changed hands at the check-in desk and if you got there late, your reservation had usually vanished. They also tended to throw you out if you stayed too long, even if you were fully paid up. Fortunately, I moved to Abadan after a while and when I came back to Tehran in the fall, I rented an apartment.

The three big American hotels were pretty civilized, oases in that clamorous, crowded, dirty city. They all had excellent restaurants and bars and they all operated caviar trolleys in the lounge. I ate more caviar that year than most people would consume in a thousand lifetimes. So many of us took duty-free kilo cans of caviar home with us that PanAm's planes had an extra refrigerator on board, just to carry them.

Not that there weren't plenty of good restaurants in Tehran: there were. And our agents arranged for me to be an Honorary Member of the Imperial Country Club, which was the preferred hang-out for the average Iranian millionaire. This establishment seemed to have been transplanted from somewhere such as Greenwich, Connecticut, equipped as it was with golf courses, tennis courts, swimming pools, horseback riding, skeet-shooting, a lavish clubhouse, etc, etc.

The affluence was astonishing. You would have to have been exceptionally dense or living in another universe not to see trouble coming. All the wealth was going to the top 1%, the educated middle class was getting nothing from the country's economic boom and the uneducated working class lived in misery.

Abadan

After a lot of effort, including many, many hours spent waiting in ante-rooms for meetings that never seemed to start less than two hours late, we were accepted as a qualified bidder for the shipyard project, the competition being Germany's Blohm + Voss. Ultimately, they got the assignment and Persian Gulf Shipbuilding eventually got built and went into operation.

I put even more effort into the ports project, which was potentially much larger and had many downstream possibilities. The target was a contract from the Ports & Shipping Organization to operate the new port of Bandar Shahpur – nowadays called Bandar-e Emam Khomeyni. For this purpose, I put together a multi-national joint venture which we called the Iran Port & Trucking Consortium, or IPTC. The participants were Arya Lines, Arvand Stevedoring, ITO – the largest U.S. terminal operating company, PIE – the large U.S. trucking company, and Sarebanha Brothers – one of the largest Iranian trucking companies. When the dust settled, we found that the PSO had awarded two contracts, one to us and one to a Korean company, each for a trial period of three months. We had to go first, which was not the preferred position, since any improvements that we could make would be there for the Koreans to build on, and on top of that, it was the beginning of summer, so the Koreans would also have the cooler weather.

Iran, with Abadan and Bandar Khomeini in the southwest, at the head of the Gulf

Anyway, I mobilized my port management team to the International Hotel in Abadan, using the poolside area as our conference room.

Damn, it was hot. There were about twelve of us – four from JJMA, two from PIE and six or more from ITO. We had four Chevy Impalas with drivers to get us to and from the port, which was 60 miles away. We were half-dead when we got back to the hotel each day and consumed enormous quantities of beer and other cold drinks.

One of the less entertaining aspects of managing this project was that few of the members of my team had credit cards. I had to pay all the hotel bills, rental car bills and restaurant bills. Thank goodness for American Express, who were cooperative

enough to mail my monthly statement to the office, so that JJMA's accounting department could take care of it.

Most of the mess at the port was caused by simple ignorance: nobody there had a clue about how to run a port or terminal. There was some deliberate obstruction, although I would not go so far as to call it sabotage. For example, the vacuum equipment that was used to unload grain from bulk carriers wasn't working at the throughput it was designed for. We couldn't find anything wrong with it and its German manufacturers flew in an engineer who couldn't find anything wrong with it either. Then one day, it hit us: the operator had it throttled back. He had a feud going with his boss and was deliberately trying to make him look bad.

We moved the grain out in fine style: the Sarebanha brothers had invested in a huge fleet of Mercedes trucks – more than we could keep loaded – and the grain was being delivered to distribution centers throughout Iran. The guys from PIE were nervous wrecks from all the time spent on Iran's terrifying highways, but grain was moving.

We survived the summer, estimating that we had about doubled the port's throughput rate, and the team went home. I and Bob Young, who was the financial member of the team and normally JJMA's CFO, went back to Tehran to try to sabotage the Koreans and close the deal.

My last few months in Iran involved a lot of sitting around, much of it by the pool at the Imperial Country Club. Once in a while, I got to go to PSO headquarters and discuss things, but nothing happened. My only real difficulty here was with Bob Young. He had decided that he liked Iran. In Abadan, we had suspected that he had discovered how easy it was to obtain hash, but if he had, it didn't seem to affect his work. Now, back in Tehran, he started a romance with the English girl who was the riding instructor at the Imperial Country Club. He stopped calling home and his wife was calling JJMA daily to try to find out what had happened to him and where his pay check was. We ordered him home and he wouldn't go. We stopped his pay and he still wouldn't go. Then one day, he just upped and went, acting as if he'd always intended to go that day and could not understand what all the fuss was about.

During this period, Norton, Lilly sent one of their guys to take a look at their JV with Arya, Arvand Stevedoring. This was Hugh Howard, a very capable and extremely likeable guy with years of experience in terminal operations. He took one look at Arvand Stevedoring and recommended that Norton, Lilly get out of it. In this situation, the prospects for IPTC's success suddenly faded, and not long afterwards, the PSO awarded the long-term contract for running Bandar Shahpur to the Koreans.

The Iranian adventure was over.

The Middle East

We might have given up on Iran but we hadn't given up on the rest of the region. In the course of the following year, I pursued a bunch of projects, none of which came to anything. None of these were consulting assignments: they were all opportunities that John McMullen was potentially interested in investing in. I look back with mixed feelings. The time spent was a failure in that nothing came of it. From a personal point of view, however, it was both wonderful experience and great fun.

A good part of this time was spent in Saudi Arabia, pursuing a contract for the operation of the new industrial port of Jubail, on the Red Sea. For this we were part of a consortium that included a Saudi construction company, a Danish construction company and a Dutch tugboat operator. In retrospect, I can't begin to remember how this particular team came together.

There were also projects to pursue in Kuwait and in Qatar, and, further afield, in India and in Egypt. I visited India several times and wish I had been able to spend some vacation time there. I loved the people and the strange mix of British and Indian cultures. I visited a very old company in the port of Bombay with the fine Scottish name of Mackinnon Mackenzie. They were in an enormous godown that occupied a whole city block. At street level there was constant movement as hundreds of workers in the minimum of clothing moved goods in and out. One floor up were the administrative offices, where dozens of more formally dressed clerks worked at rows of tiny desks under a sea of synchronized punkahs. And on the top floor were the managers, educated, well-dressed Indians, operating in mahogany-paneled offices under the stern gaze of dozens of oil paintings of their bewhiskered Scottish predecessors.

The people from Mackinnon Mackenzie took me to several shipyards, but only one stays clearly in my mind. The last 20 miles of the road to this yard seemed to have been recently cut through virgin jungle. Suddenly, however, the jungle ended and there was this great, beautiful, slow-moving river. The only sign of human life was a tiny shipyard. The yard itself had no buildings: the manager and his engineer were operating out of a tent. They were building tugboats, which are not all that simple, but the workmanship was fine. I've never seen a less mechanized operation. Their one and only piece of materials handling equipment was a chain falls, which they used to install the main engine. Everything else was moved by hand. Everything. A steel plate was moved by means of as many people grabbing it by the edge as there was room for. They were building their own outfitting basin, men shoveling out the inner end and an endless procession of women and children carrying rocks down to the water's edge to be set in place on each side. This was a surreal experience.

Seen in Morocco: tree-climbing goats

In the summer of 1976, Hugh Howard and I took part in a Department of Commerce trade mission, plugging our somewhat unorthodox ideas on port and terminal operation to generally somnolent audiences. The only good thing about this trip was that the last stop was in Casablanca. Hugh and his wife, Danielle, and I then took a short vacation. We drove down the coast from Casablanca, spent a night in Agadir and then on down into the disputed zone. We went to an auction of baby camels held before dawn at a desert oasis – another surreal experience – and then drove over the High Atlas Mountains – dirt roads – and down to Marrakesh, where we stayed at the beautiful and romantic Hotel Mamounia, which was so beloved of Winston Churchill. Hugh and Danielle took the train from there back to Casablanca to get a flight home, but I hung around for several days, exploring Marrakech and the interior of Morocco.

I spent Christmas that year in Doha, which I thought was somewhat uninspiring, but look at it now. Fortunately, one of my Scottish friends was living there at the time, so I was able to participate in the expatriate festivities.

Immediately after Christmas, I moved on to Cairo, where John McMullen had a joint venture called Transportation and Industrial Management Company, or TIMCO. (I had already told Mac how much I preferred the shorter form.) TIMCO was going to invest in the booming Egyptian economy and was run by a former VP of Chase Manhattan Bank, named Samir Fahmy. One opportunity was to invest in and expand the shipyard in Alexandria.

In pursuit of this project, I spent New Year's in Alexandria. While Cairo I had found to be endlessly fascinating, Alexandria was a disappointment, especially for someone like me, who knew a bit about its history. I was staying in the city's #1 hotel, the Palestine. Although located in the grounds of the summer palace of the Kings of Egypt, which were quite beautiful, the Hotel Palestine had all the beauty and warmth of a Soviet office building. It also seemed to be completely deserted. In the lobby, however, was a huge poster promoting a western style celebration of New Year's Eve. Book now! The scope of this promised festivity was somewhat hard to visualize, but why not? It was not as though I had a lot of choices. So I booked a table for one.

Come the hour, I ventured down to the Ballroom and found it to be enormous, ornately decorated in a 19th-century style and absolutely packed. Packed. Hundreds of Egyptian families, dressed in their best and in party mood, some already dancing to the large and loud 30s-era band. They were all at tables for ten, twelve or more. My table for one was off to one side and next to it was another table for one, occupied by a Japanese gentleman. I didn't know this person and was a bit reluctant to join up with him, in case it should turn out that he was in Alexandria for the same reason as I was. But it didn't matter. We had barely sat down before we were each swept up by an Egyptian family and made part of their celebration. Great fun.

The Bicentenary

In the summer of 1976, I managed to arrange to be home in New York for a few days, for the bicentenary celebrations. The location of my office, in the northwest corner of the Trade Center's north tower, was ideal for viewing the parade of tall ships, but I was not alone in this and the building was alive with office parties. The whole extended holiday weekend was wonderful. I imagine that it was wonderful everywhere in the U.S., but the celebrations in New York City seemed extra-special, an emotional experience that served to remind me that I had now been a permanent resident for seven years and it was time to think about graduating to citizen.

After the best part of two years in the Middle East, it was a pleasure to spend some time back home. One of the reasons I came home was that JJMA had a new President. This was George Sawyer, a man who already had an impressive track record and who wasn't through adding to it. A nuclear engineer who had served on the USS "Nautilus", his previous management position had been as a VP of Bechtel, in charge of all their Middle East projects. George was busy turning JJMA into a profitable business and he had no time for the random pursuit of purely speculative investment opportunities. Suddenly, every division and department of JJMA and its related companies had become a cost center and dozens of the more useless employees were no longer around. And, marvel of marvels, even John McMullen himself had become a cost center: we could no longer work on his projects without both a budget and written authorization. This could be awkward: it was not easy to decline an instruction from the Chairman unless it was accompanied by a charge number.

George Sawyer and I got on well from the outset. We were usually the first two into the office in the morning. The World Trade Center was very advanced in some ways: the lights and the HVAC came on automatically at 7 a.m. Before that time, you could plug a lamp into a wall socket, but that was it: I have vivid memories of coming in early, to find George sitting at his desk wearing a topcoat and reading by the light of a desk lamp.

For the next two years, George was very generous in the time he devoted to pointing me in the right direction and the tiny Marine Facilities Department became much more productive, maybe because it was more focused on consulting projects with clearly defined goals than on the loosely structured business development projects that we had been working on. The department at that time consisted of only three people. One was Bruce Southern, who had come to us from Newport News Shipbuilding and had been on the team both in Pascagoula and in Iran: Bruce developed a close relationship for us with McAllister Bros. Towing, and eventually went to work there, running their repair yard until it closed and running nearby Union Dry Dock to this day. The other was Ben Martino, who had come to us from Todd Shipyards, for whom he had been General Manager of their Galveston shipyard: Ben had also been on the team in Pascagoula and had kept busy since then being our expert on the producibility of ship designs.

California

Although the 1970s were busy years for the U.S. maritime industry as a whole, the emphasis at JJMA started to shift to Washington DC. The office established in Washington to do work for the Navy was going great guns and had begun to establish satellite offices near major naval establishments. One of these was in Oxnard, California, between L.A. and Santa Barbara, a location selected for its proximity to the Naval Surface Weapons Station at Port Hueneme. George Sawyer suggested that I should use this office as a base for developing some West Coast business, and he introduced me to some of his friends out there, including his own former employers, at Bechtel.

The Oxnard office was very small at this time. It was run by a somewhat eccentric character named John Commerton, who was very open to broadening the scope of his department's operations, but the person who got my attention was Phil Reese, a brilliant mathematician, who did not belong, it seemed to me, in an office that dealt primarily with the design of weapon systems. Phil became a sort of unofficial West Coast extension of my small consulting group. He had a mind like the proverbial sponge and was never ever short of an idea. Very stimulating company.

Our marketing efforts on the West Coast came to fruition as a result of California's Coastal Zone Management Act of 1972. This required every local authority with a piece of the coast line to develop a plan for its management that would ensure its protection and optimize its value to future generations. Phil Reese and I managed to persuade the Oxnard Harbor District that they had the world's greatest port planners right there in Oxnard, and we were hired to develop a master plan for the Port of Hueneme.

The Port of Hueneme

We had not, of course, ever done a port master plan before and it should be no surprise to hear that we never did one again. There did not seem to be anything magical about it, however, and the Port both liked our plan and followed it. When we started, the Port of Hueneme had been severely constrained by having the Navy as tenant of about 75% of its land area, and its commercial operations were limited to a few offshore supply boats and a small citrus terminal. By the end of the decade, it had become a major automobile import terminal and the West Coast hub for Del Monte's fruit imports.

Flushed with this success, we then managed to sell our services to the California Coastal Commission. One of the maritime industry's innovations of the 1970s was the transportation of liquefied natural gas, or LNG, and several major U.S. energy companies and utilities were planning to import LNG to the U.S. One of these projects was called Western LNG, or WLNG, and was led by the two major utilities in Southern California, Pacific Gas & Electric and Pacific Lighting. They were planning to locate an LNG import terminal in one of three candidate locations – Los Angeles Harbor, Oxnard and Point Conception, near Santa Barbara. The approval process ground on for years, with endless infighting, and the project was never built: all that Indonesian gas was shipped to Japan instead. But Phil and I got to do a risk analysis for the Coastal Commission, designed to evaluate the likelihood of a collision between an LNG carrier and any other vessel, however small and insignificant, that might be expected to be in the neighborhood of the proposed terminal.

Levingston Shipbuilding

While I was chasing around California, Ed Paden had moved on, leaving the Transportation Consulting Division leaderless once again. The mid-sized energy company, Ashland Oil, had bought a shipyard and needed someone to run it. Instead of hiring a headhunter, they had used a radically different approach to filling this position: Ashland's President called the Presidents of all the major shipbuilding companies and asked them to give him a name. Apparently, the name most quoted was Ed Paden's. So Ed was now President of Levingston Shipbuilding, in Orange, Texas, an internationally recognized leader in the business of building offshore drilling rigs.

Predictably, Ed started stirring things up as soon as he got there. Levingston had been privately held since before the Civil War, but the family had recently turned it over to a local bank, which had managed it with excessive caution. It needed shaking up and Ashland was apparently happy to let Ed go about doing just that. It was only a matter of time before he got me involved and my group at JJMA helped Levingston with several projects, most notably a plan to expand its ship repair business.

Time to Move On Again

After Ed Paden left us, the Transportation Consulting Division starting getting smaller, partly for lack of work and partly because several key members elected to move on. The New York office as a whole was shrinking, as the emphasis began to shift to Washington and the Navy, and some of our space on the 30th floor was sublet. I had already begun to think about moving on when George Sawyer told me that, in future, he wanted me to report to the VP, Special Projects. This was a person for whom I had no time at all and the thought of reporting to him was a huge turn-off. (In retrospect, I think that this was probably George's way of encouraging me to move on without actually having to say it out loud.) The trouble with moving on was, however, that I had carved myself a pretty small niche in the maritime business: where on earth was I going to go?

It occurred to me, of course, that there might be a position for me at Levingston Shipbuilding but Ed Paden insisted that it would not be right for him to steal me from JJMA. After a lot of phoning around and several surreptitious meetings at that year's Annual Meeting of SNAME, still held at the New York Hilton, I finally settled on the idea of joining the small but well regarded maritime consulting firm of Manalytics, in San Francisco. I resigned from JJMA and was planning the big move when up popped Ed Paden, apparently freed from his previous hands-off position, with an offer to join him at Levingston Shipbuilding, as VP Planning, at a very attractive salary. It was hugely embarrassing to have to tell Manalytics that I had changed my mind and I felt guilty about it for a long time, but this was an opportunity that could not be passed up.

So, in May 1978, at the end of my second decade in shipbuilding, I made another big professional and cultural move.

Chapter 9

TEXAS: DRILLING RIGS AND BULK CARRIERS

Only 20 years into my career and I already seemed to have lived everywhere – the London suburbs, the English countryside, industrial Scotland, remote Newfoundland, the great metropolis of New York City, not to mention stints in Iran, Greece and other exotic places. And now here I was in Orange, a town of about 25,000 people in the bottom right-hand corner of the state of Texas, on the Louisiana line.

In fact, one of the first odd things that I discovered about Levingston Shipbuilding was that, although the company was in Texas, the shipyard was in Louisiana. Most of it, anyway. About two thirds of the shipyard's 100 acres of land was an island in the Sabine River. This island had been created by the need to straighten out the river's navigational channel, which had turned what had been a thumb, sticking out from the Louisiana bank of the river, into an island. An extra dimension was thus added to our cost accounting, because hourly-paid employees had to keep a record of the time spent on each side of the state line.

Arriving in Orange in early 1978, it was no surprise to discover that my former leader, Ed Paden, who had managed to complicate my life so interestingly at JJMA, was now complicating the lives of the folks at Levingston Shipbuilding. Actually, I knew this before I got there, because he had called me in to help, as a consultant, with several projects. In essence, he was trying to do two difficult things at once. First, he was trying to make the shipyard more efficient, by introducing modern systems and procedures. Second, he was trying to broaden its business base, to make it less susceptible to the horrendous business cycles which shipyards experience.

Levingston's history went back to before the Civil War, but it really didn't take off until World War II, when it built over 100 oceangoing tugs, for both the Navy and the Army, more than any other shipyard in the country. In the post-war years, it had been in the forefront of development of the offshore industry, while still finding time to build such diverse vessels as frigates, dredges and Staten Island ferries.

Now the yard was in the midst of an offshore boom: it had just completed a series of four jack-ups and was building four drilling barges for Falcon Drilling and two deep-water drill ships for Global Marine, plus a small product carrier for its new parent company, Ashland Oil. This last contract was Ed's doing, part of his campaign to broaden the shipyard's base, in case the offshore industry were to go away, which, of course, it did a few years later.

My role in this enterprise was to improve the company's planning and production control systems, to make them adaptable to a mix of products. In fact, the system that they were operating was quite effective as a planning system but it was rigidly structured for offshore rigs and not much else, and it didn't really provide any effective control mechanisms.

This was a pretty straightforward assignment, made easier by the skill and experience of the people in the Planning group, all of whom seemed to welcome, rather than to resist, change. But things never hummed along smoothly when Ed Paden was around.

Levingston's shipyard, with a drillship in the water

Levingston's facilities on the island were reasonably well laid out, with straight flow lines and plenty of platens and lay-down areas, leading to about 1100 feet of side-launch ways and more than enough wet berthing. The problem was in the prefabrication processes, which were essentially of 1950s vintage, with inadequate machine tools and almost no automatic welding. In addition, it was totally geared to rig construction, even though, over the years, they had built almost every other type of vessel of less than Panamax size.

It is interesting to note that Levingston was the only U.S. shipyard that built every type of rig – drill ships, semi-submersibles, jack-ups, submersibles and drilling barges. At that time, it had licensees in Japan, the Netherlands and Singapore. Of most significance, when Bethlehem Steel and Marathon LeTourneau started their own yards in Singapore, Levingston had taken a different route, entering into a management contract with Far East Shipbuilding, under which, among other things, the name was changed to Far East Levingston Shipbuilding, or FELS. In one of those stunning errors of judgment for which so many U.S. shipbuilders are famous, Levingston's pre-Ashland management had passed on an option to convert that management contract into equity ownership. FELS is now, of course, the world leader in offshore rigs and hugely profitable. And the L for Levingston is still part of its name.

Ashland Oil

Nobody ever really understood exactly why Ashland Oil had bought Levingston. Ashland was a mid-sized oil company, best known, especially to NASCAR fans, for producing Valvoline and not much involved in such upstream activities as offshore drilling, but the company's Chairman and CEO, Orin Atkins, was a very non-standard, entrepreneurial type, and who knows what might have been at the back of his mind.

Anyway, having inserted Ed Paden as President, Ashland took a remarkably hands-off attitude to shipyard management. There were three control mechanisms. First, they put us in their highway paving division, called Ashland-Warren, and its CFO came by once a month for what never seemed to be much more than a social call. Second, we had to send in a monthly package of financial reports, for consolidation with those of every other division. And third, we couldn't sign a contract for more than $1 million without permission from corporate HQ.

This last was the only really effective control, because nobody at Ashland pretended to know anything about shipbuilding, our revenues amounted to less than 1% of the corporate total, and they were obviously quite happy to leave us alone, as long as we didn't screw up too badly. Getting corporate approval for contracts, however, was always a huge event, not without its entertainment value. We were usually allotted an hour with two or three key executives, but the reality was that these meetings were attended not only by Mr. Atkins himself but also by as many of the corporate executives as happened to be around, and they always took at least three hours, usually followed by dinner at the Ashland Country Club. As we walked down the corridor of the corporate HQ, deep in the woods of northern Kentucky, faces would appear in doorways and we could almost hear them whispering "Those guys from the shipyard are here again."

It was clear that the Ashland management got a big kick out of owning a shipyard and we were able to persuade them to invest quite a few millions in the yard, buying a panel line, a plasma-arc burning machine, a roll press, a floating dry-dock and other good stuff.

Selling Ashland's management on the acquisition of a roll press or the execution of a contract to build another jack-up was one thing. In October 1978, we managed to sell them on a $200-million contract to build five 32,000-ton dry bulk carriers. And as if that were not enough, we also persuaded them to take an equity position in the ownership of the ships.

The Falcon Bulkers

In the 1970s, we still had funding for Titles V, VI and XI of the Merchant Marine Act. The first of these provided Construction Differential Subsidy, (CDS), which was a form of direct subsidy to U.S. shipyards for the construction of US-flag ships for foreign trade; the second provided Operating Differential Subsidy, (ODS), a form of direct subsidy to U.S. shipowners for the operation of these ships; and the third provided government guarantees for the financing of up to 75% of the unsubsidized cost of these ships. As a result, a shipowner usually only had to put up about 12.5% of the total cost.

Most of this taxpayer support went to the big shipbuilders – Avondale, Bethlehem Steel, Ingalls, NASSCO, Sun – and to the big liner operators – APL, Lykes, Sea-Land, US Lines, etc. – but, since the 1970 amendments to the Act, some of this money was now going to the construction and operation of tankers and bulkers.

So, into our lives came an interesting character named C. C. Wei – known to his friends as C.C. – who was the owner of a company called Falcon Carriers and who wanted to build some dry bulk carriers, using a standard design belonging to Ishikawajima-Harima Heavy Industries Co., Ltd., (IHI), at that time the technological leader of Japanese shipbuilding. And C.C. was willing to risk building them in a yard with no experience of building cargo ships. One of the interesting things about C.C. was that he was one of the leading experts on contract bridge, having written books on the subject and trained his wife, Kathy, to the point that she won a world championship. Negotiating with a man like that was always interesting.

In pursuit of this opportunity, Ed Paden broadened the scope of my responsibility to include estimating and, with a lot of help from IHI, we put together the materials necessary first to convince C.C. Wei, then to convince Ashland and finally to submit the necessary applications to MARAD for CDS, ODS and Title XI financing. This was a pretty controversial proposal, and MARAD was, naturally enough, concerned about the risks associated with a rig builder venturing into commercial shipbuilding. We countered their concerns with a contractual provision that allowed either Levingston or the putative ownership company, which was called Ashland-Falcon Carriers, to opt out of either or both of the fourth and fifth ships. In addition, and possibly more significantly, we developed a technology transfer program with IHI, partially funded by MARAD.

In my opinion, this technology transfer program constituted a seminal event in U.S. shipbuilding and it will be discussed in more detail later in this chapter.

Ramping Up

So in 1979, we started building C.C. Wei's bulkers while simultaneously continuing to build jack-up drill rigs. The workforce grew from around 1,500 to well over 2,000, and our capital investments and improved systems began to pay off in the form of reduced hours, improved quality and reduced rework.

At the same time, we kept on with our efforts to turn Levingston into more of an integrated shipbuilding company. We upgraded our ship repair capability by adding another dry-dock, expanded the Engineering department significantly and added an Industrial Engineering function. And most amazingly, in retrospect, we got ourselves computerized: at the beginning of 1978, we didn't have a computer, but three years later we were doing earned-value management.

Our first bulker, the "Pride of Texas"

For ease of management and to spread risk, we created a parent company for this now quite significantly expanded enterprise, which we called Levingston Industries. The subsidiaries were Levingston Shipbuilding itself; Gulfport Shipbuilding, in Port Arthur; Levingston Armadillo, which made modular buildings for use offshore and in remote locations; Levingston Industrial Products, which built land rigs; and Levingston Engineering, which was our spun-off Engineering Department.

We made some major moves in our traditional market too, negotiating additional licenses for the construction of Levingston-designed jack-ups with shipyards in Brazil, Croatia and France. Particularly stimulating was a contract with one of our best and oldest customers, Diamond M Drilling, to build a jack-up specially designed for service in the Straits of Magellan. The hull was built, under a subcontract, by ASMAR, the Chilean Navy's shipyard in Talcahuano. We built the legs and supervised the work in Chile, including the final assembly, trials and mobilization. A highlight of this project was the attachment of several Chilean Navy

Our Chilean jack-up, the "Diamond M Magellanes"

officers to the yard in Orange, for training. Another was the christening, in Talcahuano, attended by the President of Chile, the notorious General Pinochet, whose wife was the rig's sponsor.

All this activity was managed by a relatively very small management team. There were only seven of us – a President and six Vice Presidents – and one of the reasons that we had no disasters or surprises, at least as long as the markets held up, was that we kept on top of it on a daily basis. We had two ridiculously simple management techniques. First, we all met for lunch daily at the Holiday Inn – a not very exotic locale but this was, after all, Orange, Texas, not Seattle or New Orleans – and reviewed the day's developments. Second, we had a monthly all-day – sometimes two-day – meeting, at which we reviewed the status of each and every project, in great detail. In connection with the first of these two techniques, it was particularly entertaining on Fridays, when the management committee of our seven-union Metal Trades Council held its weekly meeting at their regular table in the opposite corner of the dining room. There were not many places in Orange that you could go for lunch.

Living in Southeast Texas

Orange was (and is) a pretty small town and, as in all small towns, everybody knew everybody. I stuck out in this town: everybody knew who I was but I knew almost nobody. As a result, I chose to live in Beaumont, about 25 miles to the west, where I thought it might be possible to have a life outside the shipyard that did not get reported back to the shipyard on a daily basis.

This turned out to be only partly true. Beaumont is five times the size of Orange but it's also a small town in many ways. It did, however, have restaurants and movie theaters, which was more than could be said of Orange.

I started off in a rented town house but this was never going to be anything more than a temporary arrangement. The economics of my existence had changed dramatically with the move to Texas. Not only was I being paid a whole lot more than I had been at JJMA, but the cost of living was much lower and, wonder of wonders, there was neither a state nor a city income tax. It was time to do the American dream thing and buy a house.

After exploring the residential neighborhoods in and around Beaumont, I ended up buying a new house that was not yet under construction in a subdivision that was only about half built. I picked a lot that was situated on the outside of a 90° bend in the road, so that it was twice the area of most lots, and I contracted separately both for a pool and for a perimeter fence. It was an excellent house and remarkably inexpensive. Although I didn't live in it for very long, I owned it for over 15 years. More by luck

than anything else, it turned out to be a very attractive rental property, was never unoccupied and was almost completely trouble-free. Of course my role as landlord was made easy because one of my earlier tenants was the U.S. Army Recruiting Officer for Beaumont, the best kind of tenant, and the lease rolled over from him to several of his successors.

Another reason for living in Beaumont was that it was closer to Houston. I did not go to Houston all that often but I subscribed to the opera and the symphony in order to get a cultural fix in an otherwise cultural wasteland. It's a little unfair to call deep southeast Texas a cultural wasteland, but Manhattan it ain't.

Back in 1976, at the time of the bicentennial celebrations, I had resolved to convert my green card into a naturalization certificate. This had not yet happened, because the Immigration and Naturalization Service has this strange requirement that an applicant pretty much stay put while they process his application and I had still been rushing madly around the world on JJMA's projects. Now there was no reason to delay and I didn't: in early 1980, I took the oath in District Court in Beaumont.

IHI and Technology Transfer

Earlier in the decade of the 1970s, when the National Shipbuilding Research Program, (NSRP), was getting started, we had all agreed on the desirability of establishing some form of technology transfer deal with a leading Japanese shipbuilder and MARAD was committed to paying 50% of the cost of any such effort. At that time, the Japanese were head and shoulders the world leaders in commercial shipbuilding and IHI was recognized as their technological leader. Curiously, this was partly because IHI included the big yard in Kure that was the most famous in Japan, the Japanese equivalent of Newport News. More importantly, however, it was the Kure yard that D. K. Ludwig had bought after World War II and it was there that he and his team of U.S. managers had introduced the Japanese to systematic construction of standard-design ships in series. Many of IHI's managers, including its President, Dr. Shinto, had learnt their shipbuilding there.

Despite the availability of MARAD funds and the very vocal leadership of Lou Chirillo, of Todd Shipyards, however, no U.S. shipbuilder had yet made any attempt to transfer any technology, not even Todd Shipyards. As a result, it was little old second-tier Levingston that finally got the process going. We executed an agreement with IHI and MARAD that provided several things:

- The assignment of a team of IHI shipyard managers and engineers to Levingston for the duration of the bulker construction program;

- Visits by Levingston shipyard managers and engineers to IHI's shipyards;
- Development of a series of reports describing IHI's shipyard management systems and procedures;
- Organization of a series of conferences for U.S. shipyards.

IHI created a U.S. subsidiary for this project, run by Yukinori Mikami and Kenjiro Noguchi, and took offices in Houston, as a base for approaching other shipyards. I was in charge for Levingston, but we brought in Bob Roper, a very experienced independent consultant, who had worked on projects at several of the big shipyards, and Clyde LaRue, an industrial engineer from Newport News Shipbuilding, where he had been one of the team that designed Newport News' North Yard. Bob would be the Project Director and Clyde would be responsible for seeing that what we learnt was properly applied to what we built. We wrote a stack of reports, which were archived by MARAD at the University of Michigan and are still available somewhere on the internet, although they are now, 30 years later, more of a curiosity than anything else.

For me, one of the highlights of this program was the two-week trip to Japan. We sent three groups, each of about a dozen middle managers, to Japan, where they were indoctrinated in the intricacies of Japanese shipbuilding technology at IHI's Aioi shipyard. IHI treated me slightly differently, presumably because I wasn't going to be applying their techniques personally. I got the full tour, visiting all IHI's shipyards and engine plants, plus some interesting sights, such as Ground Zero at Hiroshima, and spending time in their corporate headquarters. There was a special dimension to this tour: my guide, Tatsuo Yamamoto, a former General Manager of the Kure yard, appeared to be determined to test my capacity for the consumption of Japanese delicacies. Many of us enjoy sushi and the other great things found in a Japanese restaurant in the U.S., but unless you've spent time in Japan with someone like Tat Yamamoto, you have only scraped the surface of Japanese cuisine. You cannot imagine the disgusting things the Japanese will eat, and not just in low-budget places. There was, of course, only one possible way of handling this gustatory gauntlet: I ate them all, expressing unreserved enthusiasm for each and every new experience.

As far as Levingston was concerned, the results of this program were mixed, but this was largely because we began to run out of work just when we were beginning to get the hang of the Japanese way. The upside was that other yards could now see for themselves what Lou Chirillo had been going on about and IHI was soon working with almost all of them.

Buying Levingston

Before we had even delivered the first of our bulkers, Ashland dropped a bomb. They had had a change of heart about being a shipbuilder and now wanted out. Ed Paden was instructed to find a buyer, but the blow was somewhat softened by the news that there was no hurry, they wouldn't sell us to a company that we didn't want to be part of, and they would keep their stake in Ashland Falcon Carriers.

We talked to all the obvious candidates and got nowhere. In retrospect, this strikes me as very strange: I thought then and I still think that what we had to sell was a pretty neat package. Maybe nobody wanted a company that was run by people like Ed Paden and me.

In any case, we ended up going back to Ashland and admitting that we couldn't find a buyer and Ashland promptly amazed us all by suggesting that Ed should buy it. When Ed emptied his pockets on the table and asked them how that would be possible, Ashland responded that they would lend him the money.

A few months later, the deal closed. Ashland sold 100% of Levingston Industries to Paden, Inc., for $26 million. Paden, Inc. borrowed the whole of the purchase price from the Bank of Nova Scotia and the Rhode Island Hospital Trust, two banks that liked maritime investments and with which we had worked when we were setting up the Falcon bulker program. The loans were 50% secured by the fixed assets and guaranteed by Ashland. We were on our own.

Creating FABC

While we were ramping up the bulker program, we had continued to build jack-ups and now we had a pretty healthy backlog. But you always have to look to the future. At that time, we all thought that the jack-up market would keep on going, because these were the years of the Carter Administration and "energy independence" was the watchword. But what would we put behind the bulkers? The obvious answer was more bulkers, but there weren't any buyers. So we looked at product carriers, marketing what we unimaginatively called a "Texas"-class tanker, which was an Americanized version of an IHI design, very similar in both size and configuration to our Americanized version of IHI's "Future 32" class of bulkers. We got very close to selling three of these ships to Ingram Tankships, but they ended up going to NASSCO. There were other possibilities, but it seemed that we were still widely seen as the high-risk shipyard.

At this point, it is necessary to introduce our Washington lawyer. When we started working on the Falcon project, we had quickly recognized the importance of having a

good maritime lawyer to shepherd our applications through the Washington maze (although we had not yet sunk so low as to consider hiring a lobbyist). Somebody, I cannot remember who, introduced us to Dick Kurrus, the senior partner of a small maritime law firm based in the Foundry building in Georgetown. He didn't seem to be too interested in our business, but one of his firm's associates, Mike Dyer, was and he was our key man in DC from then on, whether with Dick Kurrus' firm or with his own firm, Dyer & Ellis. In 1980, Mike, by then one of Kurrus' partners, introduced us to Jesse Calhoon, the President of the Marine Engineers Beneficial Association, (MEBA), and Jesse introduced us to Tsvi Rosenfeld, the owner of a Belgian shipping company called Antwerp Bulk Carriers, (ABC).

Jesse and Tsvi were both larger-than-life characters. Jesse had turned a tiny union into a Washington powerhouse, so rich that its pension fund was fully funded and owned the first two office buildings on North Capitol Street. Tsvi was a shipowner with imagination, in the mold of Malcolm McLean and Ole Skaarup. His great idea was the container-bulker, a ship that could carry both containers and dry bulk cargoes, and he was in the process of starting a round-the-world service that would keep its ships fully utilized by switching between these two modes. The new company was called ABC Containerline.

Between us, we dreamt up a US-flag entity that we called First American Bulk Carriers, or FABC, 45% of which was owned by the MEBA Pension Fund, 45% by ABC Containerline and 10% by Levingston. We had decided that there was no reason why we, the shipbuilder, shouldn't invest. Shipbuilders have done it before. Why not? It's galling sometimes to build a ship and make maybe 7% profit, and then see the shipowner get all his money back in the ship's first year of operation. Anyway, we staked our profit on this venture. Partly in appreciation for this commitment and partly because we held the balance of voting power, our partners asked us to provide FABC's first President and that turned out to be me. I was far from being the first shipbuilder to become a shipowner, but I may have been the most surprised.

With IHI's help, we designed a bulker with a rolling gantry crane and portable container guides, which would do what Tsvi wanted for his trade, and which would be crewed entirely by MEBA members, in the deck department as well as in the engine room. And with Mike Dyer's help, we went to MARAD for the full package of construction subsidies, operating subsidies and financing guarantees for two of these beauties, plus two options.

And then Ronald Reagan was elected President and the sky fell.

Chapter 10

TEXAS: A CHANGE OF COURSE

In November 1980, as the world knows, Ronald Reagan was elected President. Regardless of your views on politics in general or on President Reagan in particular, there is no doubt that his election represented a turning-point for the U.S. maritime industry. This took several forms.

A key element of Reagan's foreign policy was to build up the strength and capability of the U.S. armed services. Another way of looking at this was that we were going to outspend the Soviet Union to the point that they would essentially be bankrupt. One aspect of this policy was the concept of the 600-ship Navy. The size of the Navy in 1980 was 530 ships, and we were building about 15 new ships a year, which was a good bit short of the rate required to maintain a fleet of that size. As a result, the goal of 600 did not seem to be easily achievable. In addition, we were apparently expected to hit this target next week. The Reagan Administration's Secretary of the Navy was John Lehman, only 37 years old but scarily smart and a protégé of Henry Kissinger. And Lehman's right hand, as Assistant Secretary for Shipbuilding and Logistics, was my old friend George Sawyer.

Lehman and Sawyer made it clear that naval shipbuilding was much more important than merchant shipbuilding and it was clear to everyone in the industry that any merchant shipbuilders who wanted to survive had better switch to naval shipbuilding.

Back in Orange, Texas, we sat around the table at the Holiday Inn and discussed this prospect. Could we switch from bulkers to naval auxiliaries? What would that do to our drill rig and repair businesses? Was the solution to split the shipyard in two, building naval ships here and rigs there? We already had two yards, the Levingston Shipbuilding yard in Orange and the Gulfport Shipbuilding yard in Port Arthur. There would be a cost, but we could set up Gulfport as our rig yard and concentrate on ships in Orange. We already had to move our rigs to Port Arthur for completion, because of the bridges over the Sabine River downstream from Orange.

If we did this, where would we put the repair business? We had already discussed with the Port of Port Arthur the possibility of developing a repair yard on the inappropriately named Pleasure Island, downstream from the last bridge. And we had discussed with the Port of Orange the possibility of using some of the piers at the former Navy Base in Orange.

But first we needed to assess our chances of getting in to the Navy business. As a result, the first decision we made was that we needed to send someone to Washington

and the obvious candidate was me. Ed Paden has maintained ever since that, by the time he got back to the yard that afternoon, I had already left. This was a gross exaggeration, of course: I didn't leave until the next day.

So suddenly I became VP, Business Development, for Levingston Industries, operating out of a spare office at Mike Dyer's firm in Georgetown's Foundry building.

More Bad News

When Governor Reagan had started his campaign for the White House, he had made a lot of stirring speeches about the importance of resuscitating U.S. manufacturing industry. Of course, all presidential candidates make speeches like that, so we should not have been too surprised when President Reagan's Director of the Office of Management and Budget, an unpleasant piece of work named David Stockman, announced, on almost the first day of the new Administration, that there would be no more spending under any of the Maritime Administration's programs. At this point, our applications for the FABC container-bulkers were complete and approved, pending the availability of FY-81 money. Suddenly, there was no FY-81 money. We had no choice but to dump the project and this, of course, made the "What do we do now?" question ever more urgent.

One of the FABC ships, then "Tilly Lykes", now "Maersk Nevada"

FABC did not go away completely. It was restructured without our participation and the ships were built in Korea, by Samsung Heavy Industries. They are still operating, being managed by Maersk Line Limited as the "Maersk Nevada" and "Maersk Nebraska". After a few years, Tsvi Rosenfeld dropped out too, the ships were converted to pure containerships, and FABC became wholly owned by the MEBA Pension Fund, which ultimately sold them to P&O NedLloyd.

The elimination of the MARAD support programs had an even greater impact on the industry than the increased emphasis on naval shipbuilding. The 1970s had been a boom period for the industry as a whole and we had built large numbers not only of ships and rigs, but also of supply boats, tugs and barges. Suddenly there was no more money. But suddenly there was no more demand, either, because we had overbuilt in almost every sector. And, as if this were not enough bad news for one year, the

offshore market went into a downturn, driving dozens of rigs and hundreds of supply boats into long-term lay-up.

This was a catastrophe, not just for us but for the entire U.S. shipbuilding industry. Over the eight years of the Reagan Administration, about half of all U.S. shipyards closed and about a third of the workforce was lost.

Washington

Levingston had never been a player in politics and my exposure to U.S. politicians had been non-existent, but now we had to get involved. My colleagues in Texas knew three people in Washington: our two local congressmen and the Vice President. Unlike his idiot son, George H. W. Bush had been a real oil man. His company, Zapata Offshore, was a major offshore drilling contractor and Bush had visited Levingston many times. It seemed unlikely, however, that he was going to be either able or willing to help us.

Orange was in Texas' 2nd congressional district and Port Arthur was in the 9th. The member for the 9th district was a conservative Democrat named Jack Brooks, who, at that time, had been in the Congress for 28 years and was Chairman of the Government Operations Committee. Unfortunately, he had no interest in helping a company based in Orange. We gathered that he thought Orange should have been in his district and, as long as it wasn't, he wasn't going to help.

It looked, therefore, that any hope we might have of congressional assistance rested with the member for the 2nd district, Charlie Wilson. Yes, that Charlie Wilson, the Charlie Wilson of "Charlie Wilson's War".

I made an appointment to see the Congressman and duly showed up in his office. Not at that time being familiar with his reputation, I was fairly bowled over by his office staff. "Charlie's Angels" they were called and my, you never saw such a fine collection of tall blonde ladies. It was positively anticlimactic to discover that the Legislative Director and the Legislative Assistant for Defense were both mature males. Not too surprisingly, neither of these gentlemen made it into the movie.

Charlie Wilson himself was improbably tall and rigidly straight-backed, as if he had a steel rod for a spine. He made a big thing about being the only member of the Defense Appropriations Subcommittee who did not have a single defense contractor in his district. I was not sure how he would take the news that we were planning to change that. He looked me in the eye, however, and promised to do what he could to help, and he did, starting by introducing me to those other members of Defense

Appropriations that he thought I should know, including, most notably, two Pennsylvanians, Jack Murtha, a Democrat, and Joe McDade, the ranking Republican. Murtha is now, of course, the Chairman of the Subcommittee.

After eight years of being a Washington lobbyist and meeting and working with dozens of Senators and Representatives, I can think of only a few who looked you in the eye, listened to what you had to say, asked intelligent questions and never asked for favors. Charlie was one of those.

Our relationship with Jesse Calhoon and MEBA was also of real value to me in these early days in Washington, as was my friendship with a more traditional union leader, Page Groton, of the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers – the Boilermakers, for short.

Page was a shipyard man from Wilmington, Delaware, who had started his working life at Sun Shipbuilding, in Chester, Pennsylvania. He was the Boilermakers' International VP for Shipbuilding and he knew all the members of Congress who had anything to do with the industry. He treated them all like scum, with assorted vulgar epithets, but they seemed to laugh and shrug it off. Page and I got along well from the start and he was a key player in a lot of what follows.

Living in Annapolis

In 1980, when we expanded Levingston's Engineering department and set it up as a separate entity, we had discovered how difficult it was to attract qualified and experienced engineering personnel to deep southeast Texas. One way to fix that problem was to head north. There was no shortage of good people in the Washington-Baltimore area and many commuted from homes that were closer to Annapolis than to either Washington or Baltimore. So we decided to open an engineering office in Annapolis. The rig work and the production engineering would still be done in Orange, but the front-end stuff and a lot of the ship work would be done in Annapolis. Our VP Engineering, Joe Wise, also moved to Annapolis, so those daily management meetings at the Holiday Inn were never the same. I had an office in Levingston Engineering's space but was hardly ever there.

The other highlight of this move was that I got to hire my own right hand, Fred Hillmann, who joined us as Director of Business Development. Fred was a Webby of the same generation as those I had met during my time at JJMA, only Fred's second degree was a Master's in Economics. Most of his career had been in maritime consulting, notably with Booz Allen & Hamilton, and we worked well together from day one.

When I had moved north, I had rented a townhouse while I looked around for something to buy. I now made that move, ending up with a 150-year-old house in the Historic District, on, appropriately enough, Shipwright Street, a short walk from the City Dock. I very much enjoyed living in that house, despite its tendency to leak, and it was the scene of many fine parties. I kept it as a rental property when I later moved into Washington.

Living in Annapolis was something of a mixed blessing. It is a beautiful city, disproportionately well supplied with excellent pubs and restaurants and densely populated with educated and interesting folks, all of whom seemed to be on for a party at almost any time of the day or night. I made many good friends there and became a regular at McGarvey's, one of the best pubs I've ever known.

The problem with Annapolis was that I wasn't getting much work done and was spending altogether too much time driving to and from Washington, the from part often being at night, after a dinner or cocktail party. Sooner or later, I feared, I was going to hit something, or something was going to hit me. So, after three years in Annapolis, I bought a 100-year-old brownstone town house on Capitol Hill and solved that problem. I kept the Annapolis house for several years as a rental property: since I still owned my house in Texas, I seemed to be in danger of becoming a property magnate of sorts.

Projects in Texas

Although Joe Wise and I were now a long way from Southeast Texas, we were both still very much involved in what went on down there. Levingston was still Texas-based: our geographic diversification was yet to come. I remained closely involved in the Falcon bulker program and in the IHI technology transfer program. And we actively pursued the first naval programs that seemed to be within our capabilities, notably the construction of five T-5 tankers, a contract that was ultimately won by George Steinbrenner's Tampa yard.

The yard in Orange had been transformed by extensive investment not only in machinery and equipment but also with acres of concrete assembly platens and miles of asphalt roadways where once was sand and mud. It looked positively modern. We had even managed to transform the appearance of the elderly and weather-beaten buildings, by means of a generous application of several thousand gallons of blue paint that our friends at International Paint had suddenly found to be surplus.

Nor had we neglected the Port Arthur yard, which was now building a jack-up as well as doing a healthy repair business. We were reluctant, however, to invest too heavily

in this yard, because it was leased from the Kansas City and Southern Railway: that company was congenitally reluctant to make any long-term commitment to us and did, in fact, evict us a few years later.

Because of this, we were pursuing the development of a wholly new yard. This facility would, first, be able to handle all the repair work that we now did at the main Port Arthur yard; second, being below the last bridge over the Sabine, it would be able to handle the final outfitting of new jack-ups; and, third, for the same reason, would get us into the rig repair and conversion market. The land would be provided by the Port of Port Arthur, together with some financing. One of its features would be a new large floating dry-dock, to be built in Germany.

This project was almost at the construction stage when all the markets started going down the tube, so we shelved it. The Port of Port Arthur was not happy about this and shortly thereafter, Bethlehem Steel took over the project, developing a less ambitious version of the yard as an extension of their rig construction yard in Beaumont. They should have known better and they never managed to make much of a go of it. Ironically, because trends in the maritime industry often seem to move in circles, this yard was subsequently taken over by Texas Dry Dock, which was owned and managed by Don Covington and a team of Levingston alumni.

Sun Ship

It has already been noted that the 1970s had been a boom time for U.S. shipyards. Most shipyards, of course, respond to the requirements of shipowners and permanent financing is the shipowner's problem. One shipyard that took the opposite approach was Sun Ship, a major merchant shipbuilder located on the Delaware River, in Chester, Pennsylvania.

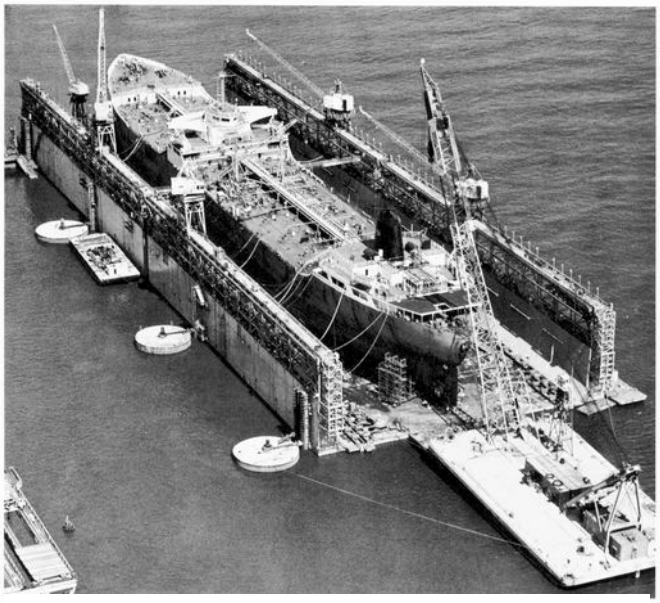
Sun Ship in 1940

Sun Ship had been established by Sun Oil Company in 1916, had been the single largest U.S. shipbuilder in World War II, and could safely be described as the country's #1 builder of tankers. Sun had always been a technological leader and in the 1960s adopted a policy of building ships of its own design for its own account, bareboat chartering them to operators. By 1979, it had more than 20 ships chartered out in this way. The

company's President during this period had been Paul Atkinson, a far-sighted and competent manager who saw the value of keeping ahead of the technological curve. Under Atkinson's leadership, Sun Ship developed the first large fast ships designed to carry highway trailers and, years before the "Exxon Valdez" accident, the first double-hulled crude carriers. During this period of Atkinson's presidency, the yard also performed the complex conversion of the tanker "Manhattan" for its historic voyage through the Northwest Passage. In addition, it built the famous "Hughes Glomar Explorer", the deep-sea mining ship that was, in reality, designed to recover a Soviet submarine from the floor of the Pacific Ocean.

Atkinson also presided over the beginning of a massive program of facility improvements. The first phase, involving construction of a 900-foot floating dry-dock and two horizontal building slabs, served by 250-ton cranes, was budgeted at $50 million and completed in 1976. The second phase, involving extensive modernization of the yard's fabrication and assembly shops, was budgeted at $100 million and completed in 1980.

Unfortunately, as the decade of the 1970s progressed, the shipyard lost more and more money. The exact amount has never been entirely clear, but it appears to have been several hundred million dollars, mostly in the five-year period from 1976 through 1980. In 1977, when these losses first became apparent, Atkinson retired and was replaced by Peter Hepp, but they got dramatically worse under Hepp's leadership, and, in January 1981, just as President Reagan took office, Sun Company announced that the yard would cease active shipbuilding and scale back to being just a repair yard.



Sun Ship's 70,000-ton dry-dock

This statement was widely recognized as being deliberately disingenuous, designed to soften the blow for the workforce. In fact, it seems certain that Sun intended to close the yard as soon as the last new ship was delivered and the only thing that could save it would be a sale. As if to confirm this strategy, Sun subcontracted the last three ships on its orderbook, a container/ro-ro ship for Waterman Steamship Lines to

General Dynamics, Quincy, and a big dredge for the Army Engineers and a big sugar barge for the Hawaiian trade to Bath Iron Works.

Ironically, in late 1980, while all this turmoil was coming to a head, Governor Reagan made one of his stirring campaign speeches to the Sun Ship workforce. Standing on the waterfront, with a ship on the yard's big floating dry-dock as a backdrop, Reagan assured the crowd that, if elected, he would work to ensure that employment at Sun Ship returned to its wartime level. Nobody believed this, of course, because the workforce in 1980 was only a little over 2,000 and in World War Two it had been close to 40,000.

Page Groton, of the Boilermakers, had been bugging me to get Levingston interested in Sun Ship. His general theme, expressed in his characteristically blunt fashion, was that practically any idiot could manage Sun Ship better than the present crowd. So, in the summer of 1981, I suggested to Ed Paden that it wouldn't hurt to go and take a look. At that point, Ed was not in the least interested in acquiring another shipyard: he was still a long way from being comfortable with his new role as owner of Levingston. But he agreed to let me go and "take a look".

This was far from being any sort of due diligence. The deal was simply that I would be given a tour, with no access to any hard data. I spent a day there and liked what I saw. (Contrary to rumor, it is not true that I like all shipyards. I have been in hundreds of them and there were many that created a negative reaction, generally along the lines of "What a dump – let me out of here!")

Based on this very superficial overview, my principal observations can be summarized in four bullets:

- Only about half the available land area – about 200 acres – and waterfront – about half a mile – was being utilized;

- Labor productivity was not good: every third person seemed to be sitting around doing nothing and some of the expensive new machinery, notably the panel line, was not being used at all;

- The number of employees in the Administration and Engineering buildings seemed to be wildly excessive compared to the number of workers actually building or repairing ships; and

- There was no doubt that the yard had all the physical resources needed to build naval auxiliaries, such as oilers and sealift ships.

Back in Washington, Page Groton showed me the labor agreement. It was positively Victorian and explained why so much expensive new equipment was lying idle: the union's members did not have to work with any machinery that effectively eliminated their jobs. Page, however, made it clear that this could be fixed for a new owner with a positive attitude and an aggressive business plan. I believed him, because we had already seen, at Levingston, the beneficial effects of his influence over Boilermaker locals. If he had so much influence at Levingston, where the Boilermakers were one of seven unions operating under the banner of the AFL/CIO's Metal Trades Council, how much more helpful might he be at Sun Ship, where every production worker was a Boilermaker?

Of course, we had no idea how much Sun might want for the yard or where we would find the money. But we took the next step, which was to sign all the non-disclosure agreements and begin a due-diligence effort. We went about this very carefully. There was no doubt that the yard had been losing a lot of money for several years. Ed Paden kept asking the critical, if rhetorical, question: "Why would anyone want to buy a business that loses money?" Of course, this may have been directed more at the folks from Sun than at his team. The answer was that we ought to be able to turn this place around with the help of four ingredients:

- A new labor agreement and a new era of constructive labor-management relations;
- IHI's Japanese shipbuilding technology;
- Some profitable contracts; and
- Some form of utilization of all the idle real estate.

Another factor that influenced us was that, all the time that we worked on this effort, we never saw any sign of any other interested parties. Later on, we learnt that Paul Atkinson had put together some kind of investment group that had offered Sun $200 million for the yard and been turned down. At the time, however, there was no sign of Atkinson, or of anyone else.

All of this emboldened us to make an outrageously low offer. If it was turned down, no big deal, we would just continue working with what we already had. If it was accepted, we would pull out all the proverbial stops to turn this great shipyard back into the success story that it once had been.

How low could we go? One school of thought held that we should ask Sun to pay us to take the shipyard off their hands. Others felt that, even if we never built another

ship in the yard, we would make money in a liquidation and should offer a price that reflected liquidation value.

In the end, we bought the assets of Sun Ship for only $18 million, less than we had paid for Levingston. We gave Sun two promissory notes, one for $10 million, secured by the floating dry-dock, and one for $8 million, secured by the land and other fixed assets. We separately contracted to finish the current three-ship backlog – two container/ro-ro ships for Waterman and a trailership conversion for Matson – on a cost-plus basis. In addition, Sun contracted to cover any overhead costs above an agreed level until the delivery of the last of the three ships, and also to pay the interest on the two notes for the same period.

The deal closed on February 8, 1982. Sun brought a check to the closing.

Suddenly we owned one of the world's leading tanker builders as well as one of the world's leading rig builders.

Chapter 11

PENNSYLVANIA: PENN SHIP AND THE NAVY

On February 8, 1982, Sun Ship became Penn Ship, or, more correctly, Pennsylvania Shipbuilding Company. The formal announcement was attended by Governor Dick Thornburgh, U.S. Senators John Heinz and Arlen Specter, U.S. Representatives Bob Edgar and Charlie Dougherty, and a host of local dignitaries. Great things were clearly expected of us.

If we were going to be able to meet these expectations, some major changes would be needed. The first of these had already been taken care of. Ed Paden had insisted from the outset that we would not buy the yard without a new labor contract and, with help from Page Groton, from Boilermakers Headquarters, we had one. There were two principal differences from the old contract, one designed to reduce manhours, the other to reduce the average cost of a manhour. First, the union dropped their resistance to the use of new, labor-saving, machinery and equipment. In addition, they accepted the introduction of a two-tier pay scale, under which new employees would have to work their way up to the full journeyman rates. Our principal concession was the retention of the seniority rule, as applied to lay-offs. We were not happy about this, but successful negotiations are necessarily double-edged.

Fixing labor was one thing: we also needed to fix management. Ed stunned the industry by bringing two senior Ingalls Shipbuilding executives out of retirement. Ned Marandino, a former President of Ingalls Shipbuilding, would be Penn Ship's President, and John Serrie, a former VP Operations at Ingalls, would be Penn Ship's VP Operations. Our banker, Bob Romano, left Rhode Island Hospital Trust to be VP Finance, Joe Barrios moved from Texas to be VP Programs, and Joe Wise moved from Annapolis to be VP Engineering. I became VP Marketing, a title that, I soon discovered, also covered business development, government relations and all the miscellaneous projects that nobody else wanted.

All but three of Sun Ship's huge team of Vice Presidents had come from the oil company and they were gone, literally gone, the day before the sale closed. Of the remainder, their VP Operations never made it through his first day of working for John Serrie. Their VP Marketing became my number two, but that didn't last long either. The one survivor was a retired Navy Captain, John Orem, who was a tower of strength throughout the next couple of years, as we tried to break into the naval shipbuilding market.

We had already observed that Sun Ship was terribly top-heavy in indirect personnel and Ned Marandino wasted no time in thinning this army of people down to what

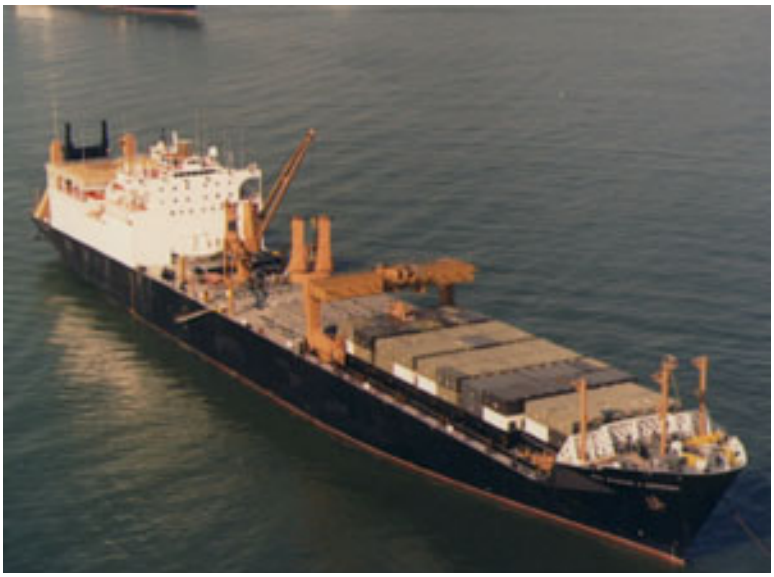
was needed. This was painful, of course, because there were a lot of really good people working there. In my area, there was a market research group of about a dozen people. This would have been a wonderful resource, almost unique in the industry, but it was clearly unaffordable.

Another early cost-saving measure was to close the yard's relatively new Engineering and Management Building, which was in Eddystone, the community immediately to the south of Chester. It was outside the yard, by definition a dreadful place to put a shipyard's engineers and managers. We moved everybody back into the WWII-vintage Administration Building, which was inside the yard and sitting empty. We then leased the Engineering and Management Building to Boeing, whose helicopter manufacturing plant was not far away. Boeing later bought the building from us.

There is no doubt that our cost-cutting measures were draconian, especially, maybe, because neither Ned Marandino nor John Serrie were warm-and-fuzzy managers, who could be relied upon to be gentle with their victims. As a result, we created a significant pool of unhappy, even bitter, ex-employees. But there is also no doubt that these reductions in strength were necessary. If the victims were resentful, that resentment would have been better directed toward Sun than toward us.

Working off Sun's Backlog and Building Our Own

Our first challenge out in the yard was to work off Sun's backlog. This consisted of two multi-purpose container/ro-ro ships for Waterman Line and the conversion of one of Matson's trailerships to allow it to carry cars. The last of these three jobs was the easiest: the work was already 50% done and we were able to redeliver the "Lurline" in only four months, in June 1982. The other two jobs were more work. The first of the two ships, the "John B. Waterman", was in the water and should have been relatively straightforward, but we found that a lot of work had to be ripped out and redone, something we had not bargained on. The second, the "Thomas Heyward", was easier: although it was not as far advanced as its sister, there was much less rework required. In addition,



One of the Waterman ships, after conversion to T-AK

Waterman Line was in no hurry: they had cancelled their plans to put these ships in commercial service in order to offer them to the Navy for conversion to prepositioning ships. After a lot of hassle, we delivered the two of them in just over a year, in February and March of 1983.

The good news about these three jobs was that we recorded significant productivity improvement and completed them for roughly half the manhours that Sun Ship had estimated. As a result, we made good money on them and could feel reasonably optimistic about our ability to compete for new work. Because new work was needed quickly. The yard's fabrication shops were almost out of work.

The principal reason for buying the yard had always been that we would have a better shot at naval contracts in Chester than we would have had back in Orange. And with John Lehman and George Sawyer driving the Reagan Navy towards that magic number of 600, there was a positive flood of Requests for Proposals, (RFPs), coming from Naval Sea Systems Command, (NAVSEA).

In the course of 1982 and 1983, we prepared and submitted proposals for at least 11 programs that I can remember. It is unlikely that the following list gets them all in the correct chronological sequence, but at least it will provide a taste of the frenzied activity that was our proposal group, headed by John Orem:

- T-5: Our first move was to modify the proposal that we had submitted as Levingston Shipbuilding for the construction of five product carriers, to split the work between Levingston and Penn Ship, simultaneously taking advantage of the extensive experience of tanker design and construction to be found in Chester. This contract was awarded to George Steinbrenner's Tampa Shipbuilding, which actually performed well, despite the industry's unanimously negative view of its capability.

- BB 62: It was stretching credulity for us to go after the contract to reactivate the battleship "Iowa", but we had one of the few dry-docks that could lift her and we put together a very strong team. This contract went, however, to Ingalls.

- T-AH: The contract to convert two commercial ships to hospital ships was more suited to a basically commercial yard. We teamed for this with Holland America Line and offered the cruise ships "Veendam" and "Volendam", originally built by Ingalls as "Brasil" and "Argentina". Unfortunately, this job went to NASSCO.

- T-AK: In this procurement, the Navy had requested proposals for enough prepositioning ships – either new construction or conversions – to support three Marine brigades. Waterman Line was sure that its three new ships were ideal for

this program, and indeed they were, but Waterman's management was insistent that the conversion should be done by NASSCO, even though two of the ships had been built in Chester and were, in fact, still sitting in our yard. We argued this with them for weeks but they were adamant and the ships were, in fact converted to T-AKs by NASSCO.

- T-AKR: The T-AKR program was similar to T-AK in some ways, except that the Navy had already acquired the ships involved, eight high-speed containerships previously owned by Sea-Land and known as SL-7s. The project involved converting them to roll-on/roll-off ships, to be used as surge assets in an emergency. Finally, we got lucky. The Navy awarded three contracts, sending three ships to Avondale, three to NASSCO and two to us.

- T-AFS: This was yet another conversion program. The Navy had chartered three redundant stores ships from the Royal Fleet Auxiliary, (RFA), the British equivalent of Military Sealift Command, (MSC), and wanted to convert them to meet the U.S. Navy's requirements. This work was better suited to a repair yard and ended up going to Norshipco.

- T-ACS: This too was a conversion program, best suited to a repair yard. It involved the installation of cranes on twelve old break-bulk cargo ships to allow them to unload a larger ship without coming alongside a pier. The program was managed by MARAD and ended up being spread around several yards.

- T-AVB: This too was a conversion program, best suited to a repair yard. It involved the transformation of two old break-bulk cargo ships into aviation support ships. The program was managed by MARAD and ended up going to Todd Galveston.

- WHEC FRAM: During this period, the Coast Guard sought proposals for the FRAM (Fleet Renovation and Modernization) of its twelve "Hamilton"-class High-Endurance Cutters, (WHEC). This was another program that was not really suited to our capabilities but we tried our luck anyway. The program ended up being split between Bath Iron Works and Todd Seattle.

- T-AO: This was the only new construction program involving T-ships. The initial competition was for four fleet oilers and our competitors were Avondale, NASSCO, Quincy and Sparrows Point. Avondale won.

- AO(J): This competition was for the jumboization of four existing fleet oilers, all of which had been built by Avondale. The usual suspects bid but Avondale won.

The net return on all this effort was pretty slim, amounting to two T-AKR conversions at $50 million each. Fortunately for our credibility, we performed satisfactorily on this program: if anything, we gave the Navy more than they had asked for. The highlight, however, was that we took advantage of Sun's investment in the facilities: we lifted each ship in our big dry-dock and transferred it back on to the horizontal construction slabs in the North Yard, where we could use our 250-ton cranes.

The T-AKR "Denebola", after conversion

We believed at the time that this move was worthy of the Guinness Book of World Records, as the single heaviest object ever brought ashore. Each ship weighed about 25,000 tons when it came ashore and about 27,000 when it went back into the water. The most interesting part of this exercise was the return trip. After several stationary weeks supporting a 25,000-ton ship, few of the wheels in the cradle's dollies were very keen on rotating and it took us a while to overcome all that inertia.

Proposal Management

All this proposal activity kept a bunch of people very busy, not least me.

It was in this period that it really dawned on me that, in this country at least, few engineers can write plain English. The Navy's requirements for technical proposals were extensive. It seemed to me that there were three key ingredients responding to them, in addition, of course, to having something to sell. Proposals needed to do three things:

- Answer the question, carefully following the specified format;
- Be written in plain, intelligible English; and
- Intersperse the text with a number of strong selling points, highlighted in some way, so that they would not be missed.

Unfortunately, our talented engineers and project managers were not good at this and so began my career as a proposal writer and manager. The last stage in the production of every one of these proposals was a word-by-word edit by me. This annoyed a lot of people – "What do you mean, I can't write English?" – but it was both necessary and worth it, and I'm still editing shipyard proposals today.

It wasn't just the technical proposals. The Navy's requirements for cost proposals were also extensive and I soon discovered a whole new set of challenges. Although we had a large and experienced Estimating Department, there were three problems:

- The estimators were estimating costs as if they still worked for Sun Ship, making no adjustments for the changes introduced by Penn Ship;

- Estimators were not just estimating costs, they were also making pricing decisions;

- Management review of estimates was minimal.

So we made some changes:

- Production management, who understood the Penn Ship changes, was directed to get involved in the estimating process and to sign off on the finished estimates.

- The Estimating Department was instructed to confine its efforts to calculating direct costs – labor manhours and material and subcontract dollars – and to estimate these costs for a single ship, without any consideration of learning curves.

- Every estimate was rigorously reviewed, usually in a day-long process. The entire management team reviewed an estimate, questioning not only the Estimating Manager but the individual estimators as to their assumptions, methods and data sources. Our first Estimating Manager quit after a couple of these, saying something along the lines of "Nobody ever questioned my numbers before."

- In a separate meeting, the management team decided, as a group, how the cost estimate would be extended to pricing, based on a lot of input from the company's tireless Controller, Bill Jarrett. We decided what labor rates, overhead rates, G. & A. rates, learning curves, profit margins, etc. would be used, which we had to do partly because the Navy required it that way and partly because our cost structure was such that these parameters were constantly changing.

I look back on this with satisfaction. Damn, we were thorough. In the long run, it didn't save us: Penn Ship still went down the tube, but it didn't go down the tube because we got the numbers wrong, although that's what many people think.

The T-AO Program

In 1984, the Navy put out an RFP for some more oilers, only this time the procurement strategy allowed the possibility of there being two contractors. This approach was part of the Navy's general policy in those days, when there were still more than a dozen active builders of large ships, of having two sources for every major class of ship.

Since Avondale had won the first competition and was building the first four ships of the class, T-AOs 187 through 190, it could be assumed that they would be the low bidder in the new procurement. As a result, this was really going to be a race for second place, the competition being Quincy, Sparrows Point and NASSCO.

So we went through our newly rigorous estimating and pricing processes, polished the proposal until it gleamed, and sent it in. And, to our amazement, we were the low bidder. What had we done wrong? After all, we had been trying to come in second.

The Navy seemed to be as stunned as we were and proceeded to conduct what must have been one of the longest and most detailed pre-award surveys ever. They grilled us endlessly on how we had arrived at our numbers, repeating the same questions endlessly and getting into some sensitive areas, such as our financial condition.

There were three reasons why our numbers were what they were:

- Our manhour estimates reflected an aggressive degree of improvement in productivity, based on input from our IHI friends, who were sure that it would be easier to implement their technology in Chester than it had been in Orange.

One of the Navy's T-AOs

- Although the RFP had required us to price detail engineering as if this were a stand-alone contract, we had declined to include a price for this, maintaining that we would be happy to use the detail engineering that had been developed by Avondale and that the Navy owned.

- Our overhead and G. & A. rates assumed that our workload would include both a base load of ship repair and industrial work and another newbuilding program.

The Navy was satisfied at last, however, and, on May 6, 1985, we signed a contract for the construction of two T-AOs, with options for two more. Just over three years after taking over the yard, we were finally in the naval shipbuilding business.

Of course, now we had to perform and it is a matter of record that we didn't. All went well for a while and, in February 1986, the Navy exercised the two options on our contract. But in 1987 Penn Ship began to come apart for other reasons, with a major negative impact on the T-AO program. This topic will be addressed further in the next chapter.

The AOE Program and Ship Repair

While the planning, engineering and procurement phase of the T-AO program progressed, we were working to add other programs to our workload.

The number one target was the Navy's five-ship AOE program, the competition for which would be held in 1986. From our point of view, the AOEs were the perfect complement to our T-AOs. Although larger and more complex than the T-AOs, they were still basically large auxiliaries, with none of the added complexities of combatant ships. Unfortunately, our four principal competitors – Avondale, NASSCO, Quincy and Sparrows Point – all wanted this program too and the last two were now essentially out of work. We went through exactly the same steps for this proposal as we had for the T-AO program, knowing that, if we were to win, we would be subjected to the same grilling as before, but this time the surprise low bidder was NASSCO.

NASSCO's price for the AOEs was even more startling than had been ours for the T-AOs. It was about 20% lower than ours and we later learnt that our price was almost identical to Avondale's. We did some yelling and screaming, of course, as the other yards had a year earlier, but the Navy got a performance guarantee from NASSCO's parent company and, in January 1987, awarded the AOE contract to NASSCO.

Our workload challenge suddenly got a little more serious.

It is interesting to look back: NASSCO did, in fact, underbid the AOE program, because their over-run on those ships was so great that the Navy ended up cancelling one of them and persuading the Congress to let them buy four ships with the funds appropriated for five.

But then, NASSCO had a rich parent company and we did not. One of Colton's rules: *If you want to succeed in shipbuilding, get yourself a rich parent company.*

If there was an element of desperation to the bidding for all these T-ship contracts, there was good reason. In an effort to emphasize the priority of naval shipbuilding, albeit in contradiction of its campaign promises, the Reagan Administration had eliminated funding for Titles V and XI of the Merchant Marine Act, that is, of subsidies for the construction and financing of foreign-trade ships. In addition, the Administration had started to question the sanctity of the Jones Act. As a result, the flow of commercial shipbuilding contracts had almost completely dried up.

Unfortunately, there just weren't enough T-ship contracts to support five big shipyards. General Dynamics Quincy, one of the world's great shipyards, founded in the 19th century, was the first to give up the struggle. It was followed by Bethlehem Sparrows Point, although they struggled on for a while as a repair yard. Penn Ship not too far behind. Other major yards that closed in this period were Lockheed's yard in Seattle and Todd's yard in San Pedro. In addition, many, many smaller yards, across the country, closed in that decade, driving tens of thousands of workers into other industries and incidentally creating the horrendous shortage of skilled, experienced, shipbuilders that we have today.

Building up Penn Ship's repair business was our other priority in this period and there were two pieces to this puzzle – the Navy and the commercial marine industry.

Another facet of the Lehman years at the Navy was the idea that the Navy's ships and facilities were overly concentrated in two places – Hampton Roads, the home of the Atlantic Fleet, and San Diego, the home of the Pacific Fleet. Lehman created "home ports" all over the place, some of which were never completed. Maintenance of the ships distributed to these new home ports would be contracted on a multi-ship, multi-year basis to ship repair yards within the home port area. This sounded good to us and we secured two of these contracts, one for a group of frigates based in Philadelphia and one for a group of auxiliaries based in Earle, New Jersey.

The commercial repair business was harder to break into, for three reasons. First, commercial repair is a very regional business: ship operators tend to use repair facilities that are close to their discharge ports. Second, foreign-flag ships rarely use U.S. repair yards, because of the cost. And third, most of the US-flag vessels operating in the Delaware were barges, while our single dry dock was 700 feet long and 198 feet between its wing-walls. To solve this last problem, we brought an elderly, barge-sized dock up from Texas but it promptly sank at its moorings, which did not do much for our credibility. We never made much progress in the commercial repair sector.

The Move to Washington

Throughout the first three years of Penn Ship's existence, I had been living in Annapolis. I drove up to Chester every week and I also spent time in Washington every week. This was getting to be quite an ordeal: sooner or later I was going to fall asleep or get in an argument with an 18-wheeler. Since there did not seem to be much prospect of a change in lifestyle, I moved in to Washington, specifically to Capitol Hill. I could now walk not only to the congressional office buildings but also to Union Station, where I could get a Metroliner to Wilmington and be met there by someone from the yard. The weekly trips to the yard continued but life was a bit more civilized and less stressful.

My new home was a 100-year-old brownstone on C Street N.E., just off Stanton Park. I bought it from another of the many colorful characters that I have had the good fortune to meet over the years, an ex-hippy dentist from California who was also the president of the Washington area's Vintage Rolls-Royce Owners Club. He had bought it from the D.C. government, which had condemned it after the Martin Luther King riots. He had had to evict squatters and camp in it until the utilities could be made to work. His restoration was somewhat in the 60s style – a conversation pit in the living room, for example – but he had not spared money on the work and it was a house with a lot of character. I knew it would be a perfect home and I lived there for 13 years.

Another aspect of this period and the move to Washington was the increase in the amount of time that I spent lobbying. When we had first created Penn Ship, several of the local congressional delegation had urged us to retain Steve Minikes as our corporate lobbyist, which we did. Steve was a lawyer, a protégé of Henry Kissinger and Bill Casey, and a former General Counsel to the CNO – when the CNO was Bud Zumwalt. He handled the City of Philadelphia's defense interests in Washington and we worked as a team on Penn Ship's issues for the next six years.

In those early Penn Ship years I had camped in any available space in Dyer & Ellis's offices in Georgetown. By the time I moved into DC, Dyer & Ellis had grown and moved to the Watergate complex, so we got businesslike and formally rented space from them. Not that I was there a whole lot, between the time I spent at the yard, on Capitol Hill, at the Shipbuilders Council and schmoozing the Navy, but it was a base.

So we had a Washington office and a K Street lobbyist and I was now a registered lobbyist. What next?

Chapter 12

PENNSYLVANIA: DEVELOPING THE BUSINESS

The T-AO program and a modest level of repair work were not enough for Penn Ship to meet its financial goals. We needed more work but there did not seem to be many opportunities. On top of this, we started to have problems with the Navy. These were not so much with our primary clients in Washington, the Program Manager for Auxiliary Ships, (PMS 383), and his Contracting Officer, but with the Supervisor of Shipbuilding (SUPSHIP) responsible for on-site supervision of our performance on both the new construction and repair contracts. It is a bizarre facet of naval shipbuilding that the first two of these three government employees have all the responsibility but the third has all the power. A SUPSHIP can, if he so chooses, delay payment of a contractor's invoices to the point that the contractor runs out of cash and goes out of business. (An interesting side effect of this problem is that it tends to breed delusions of power that verge on being Napoleonic.) A contractor can dispute the hold-up but, in the meantime, he's going broke. And several undercapitalized shipyards have, in fact, gone broke this way. Remember the rule:

"To succeed in shipbuilding, first get yourself a rich parent company."

Penn Ship did not have a rich parent company. Penn Ship was owned by Ed Paden. Ed also owned Levingston Shipbuilding but it too was hemorrhaging cash, thanks to the collapse of the offshore market. Fortunately, the two companies were structured in such a way that neither could pull down the other, but the ultimate owner of both was still Ed Paden and both were out of cash.

Ed and most of his senior managers thought that the chances of recovery in Pennsylvania were better than the chances of recovery in Texas, so we put Levingston into bankruptcy and looked for a source of cash for Penn Ship, i.e., another investor.

Putting Levingston into bankruptcy was not popular in Texas and, looking back, I think that we might have been able to find an investor for Levingston too, but we didn't and that fine shipbuilder was liquidated. The only positive thing about this was that Don Covington and a cadre of Levingston people bought some of the assets, leased the old Weaver shipyard in Orange and started Texas Drydock, Inc., (TDI).

TDI was successful, initially in ship repair, then in building drilling barges. It followed up on our original business plan for Levingston and took over operation of the Port of Port Arthur's shipyard from Bethlehem, adding several topside facilities in the Port Arthur/Sabine Pass area. In 1997, it was sold to Halter Marine Group and became TDI-Halter: in this situation, it was able to add the other big yard in Orange, the

former Consolidated Steel yard immediately adjacent to Levingston. This facility had been bought by Halter's former parent company, Trinity Industries, only a few years earlier, for use as a barge builder. After the merger of Halter with Friede Goldman, what had started as TDI became the Texas half of Friede Goldman Offshore and continues today as the Texas half of Signal International.

New Owners

Meanwhile, back in Pennsylvania, we had found ourselves a white knight, in the form of a real estate developer named Tom Weller, from Mobile, Alabama. We had bumped into The Weller Company in connection with the lease of a warehouse somewhere and now here were Tom and his two partners, considering an investment in Penn Ship. Ed introduced me, with his usual, much exaggerated, summarization of all my capabilities and Tom asked me a very reasonable question: "Why would I want to own a shipyard?" I replied "I can't think of a single reason except, perhaps, if it came with over 100 acres of unutilized industrial property on a mile of waterfront."

One thing we all learnt pretty quickly was that Tom and his partners were no lightweights. They went over the numbers with the proverbial fine-toothed comb. They brought in their own financial expert, a weird person named Rick Rees, who had been Harold Halter's CFO in the early days of Halter Marine, and their own lawyer, Greg Leatherbury, a very capable guy with a deceptive southern-country-boy style, who had been Halter's lawyer in a big dispute with Bethlehem Steel. They asked a million questions, mostly of me and of Bill Jarrett, our controller. I took Tom to DC and introduced him to the Navy and to our congressional supporters, and to Harrisburg to meet the Governor. And then, in the summer of 1985, we reached an agreement and Tom's investment company, City Capital Corporation, bought control, creating a new parent company, called Capital Marine Corporation, in which Ed Paden was a minority stockholder. Ed went back to Texas and Charlie Payne, a retired admiral who had taken over from Ned Marandino as President of Penn Ship, retired again and went back to Annapolis. Tom Weller became Chairman and Ron Stevens President. The new team had taken over.

Developing the Business

Although there were no other changes in the management team that I can recall, my responsibilities were expanded to reflect the increased emphasis on business development. Without being relieved of any of my Penn Ship responsibilities, I now became VP, Corporate Development, for Capital Marine Corporation. Capital Marine didn't have any other employees but it was going to be the parent of any new business enterprises, so this was reasonable enough.

The first priority was to do something with the north half of the shipyard but there was unutilized and underutilized space everywhere.

The total yard area was about 200 acres – about half of what Sun Ship had operated in World War II. The southern half of the property was called the Central Yard and was the original yard, established in 1916. The northern half was called the North Yard. The old South Yard, to the south of the Central Yard, and the old No. 4 Yard, to the north of the North Yard, had been sold off in the 1950s.

The Central Yard had all the production shops and assembly areas, offices, warehouses and open storage, the now abandoned inclined building ways, the big floating dock and the outfitting basin. Maybe 20% of the area was unused, not counting the building ways, but it wasn't easily usable.

The North Yard had the recently constructed erection slabs with their giant cranes and that's about it. Its WWII production shop was being partly used for overflow storage and vehicle maintenance. Maybe 20% of the area was being used productively. Obviously it would be nice to be able to market the North Yard in its entirety, especially as it was fenced, separated from the Central Yard by a creek and had its own gate, but this would mean reactivating the inclined building ways for the construction of the T-AOs, an idea that did not go down well with the guys in Production. It seemed clear that the only way this might happen would be if a use could be found for the North Yard that was in some way more attractive than building ships.

A second advantage of this yard was its location, not only with a fully developed waterfront, but also with a spur from the main CSX east coast rail line, direct access to I-95, I-476 and the New Jersey Turnpike, and only ten minutes from Philadelphia Airport. The highest and best use was probably going to be as a cargo terminal, but we would consider anything.

So I set out to find a tenant. We advertized. We enlisted the help of the congressional delegation, the state government and the county. I talked to some sincere but misguided people. I talked to some total loonies. I talked to some people with great ideas but no money and no credit. I talked to some people with money but no brains. It was all very frustrating.

The most interesting project I pursued for the North Yard was the concept of turning it into a bonded import terminal for all the state's imported wine and liquor. I had met one of the members of the Pennsylvania Liquor Control Board, (PLCB), and discovered to my amazement that this organization bought about $1 billion worth of booze a year, much of it imported. I went to Harrisburg and looked at the numbers,

and concluded that the volume shipped in from Europe would employ two small ships, so I proposed that, instead of entrusting it all to the transatlantic liner services, we should start our own dedicated service, using chartered ships and the North Yard as the distribution center. And possibly later building and operating our own ships. A great idea, but it had no traction. If there was a more stuck-in-the-mud organization than the PLCB, I never saw it.

The one project that had some traction and that might be a winner today was called trash-to-steam. All the City of Philadelphia's trash would be barged to an enclosed facility in the North Yard where it would be incinerated and converted to steam, with the ash being shipped out in specially designed ships to an island somewhere that had agreed to take it. Trash-to-steam plants have since been built – the City of Philadelphia actually built one in the former Philadelphia Naval Shipyard – but in 1985-1986, they sounded too risky to be politically acceptable.

Penn Terminals

It looked more and more as though we were going to have to create our own business here. So we did. We created Penn Terminals. We cleared out the big old production shop to create a warehouse. We cleared all the open area – no small task in a shipyard, where junk accumulates daily. We built a multi-lane truck gate and a scale to replace the conventional gate. We bought an old container crane from a terminal in New York and modified it in the shipyard to run on the same rails as the erection cranes. We ordered a new container crane from Yugoslavia. We paid for most of these improvements with a loan from the Commonwealth of Pennsylvania. And we signed an agreement with a German company called Senator Line, which operated small containerships and was fed up with being treated as a third-class citizen by all the big terminals.

One of the highlights of getting Penn Terminals started was a labor dispute. Since the Penn Terminals property was part of the shipyard and we were, in fact, building ships in it, the Boilermakers reckoned that any hourly paid jobs at Penn Terminals were theirs. Fair enough. We set it up so that Penn Terminals had no hourly paid employees but could call on the shipyard for whatever help was needed – crane operators, drivers, maintenance mechanics, whatever. The ILA had a fit. Their view was that all stevedoring jobs on the Delaware were theirs. The ILA sued the Boilermakers and picketed the shipyard gate. We had the police remove them because they were interfering with our business and they had no dispute with us. In the end, the Boilermakers hung in there and won and the net result was, and still is, that productivity at Penn Terminals is more than double that at the best of the ILA terminals on the Delaware.

So, Penn Terminals opened for business in 1986. Joe Wise, our VP Engineering, transferred over there to run it, and it's been a huge success as a multi-client, multi-cargo independent terminal. It now handles containers, project cargoes, refrigerated cargoes, steel and lumber. It's still operated by the Boilermakers, it still belongs to Tom Weller's City Capital Corporation and it still makes money.

The Wetherill Plant and the "Sun 800"

The other two items on my list of business development challenges were the Wetherill plant and the "Sun 800".

The Wetherill plant was located about a mile away from the Central Yard gate and occupied an entire city block, in the heart of residential Chester. It was where Sun Ship had, from 1923 until the 1950s, built Doxford marine diesel engines, the only plant that built slow-speed engines in the U.S., ever. It was now the shipyard's machine shop, a magnificent old building with natural lighting, packed with priceless machinery, most of it old, a lot of it redundant or obsolete. And not doing anything. Could we make it do something? If not, what?

Well, the obvious thing to do was build diesel engines. As it happened, the U.S. marine industry had just rediscovered the diesel engine, after years of nothing but steam. Commercial ships could use imported diesels but the Navy, which wanted medium-speed diesels, had to buy American. There was at that time – and still is – only one U.S. manufacturer of medium-speed diesel engines – Colt Industries, in Beloit, Wisconsin, which builds Pielstick engines. So we sat down with the leading European manufacturer, Denmark's Burmeister & Wain, and proposed giving Colt some competition. They considered it. The plan was to start as just an assembly operation and gradually develop the capability of doing the whole thing, working as a joint venture. But it was not to be. In the end, we moved the key items of machinery into the shipyard, liquidated the rest and sold the property for redevelopment, although it is today still an empty lot.

The "Sun 800" was an 800-ton floating crane, built by Sun for the sole purpose of installing the hoisting mechanism in the "Hughes Glomar Explorer", the famous ship which Sun Ship had built in the early 1970s, ostensibly as a deep ocean manganese mining ship but, in reality, to recover a sunken Soviet submarine. When we bought the yard, we changed her name to the "Penn 800". Her designers, still working in our Engineering Department, then told us that she had, in fact, been designed to be upgraded, if necessary, to 1000 tons, so we upgraded her and changed the name to the "Penn 1000". Unfortunately, she still spent most of her days tied up at one of our piers. It seemed that there wasn't much call for a 1000-ton floating crane.

We solved this problem, we thought, by moving her to Norfolk, although she broke her tow on the way there and we nearly lost her. We created a cost center for her, renamed her "Chesapeake 1000" and hired an energetic full-time manager who would market her services all along the Atlantic Coast. Finally, this unusual asset, the biggest floating crane on the east coast, started to get work. She's still out there working, although now she belongs to Donjon Marine.

The "Chesapeake 1000", ex-"Sun 800"

The Washington Scene

In what seemed like a sort of double life, I was spending as much time in Washington as in Chester. I tried to spend two days a week in Chester, taking the Metroliner to Wilmington, where someone from the yard would pick me up, and staying over in a company-owned apartment in Swarthmore. The balance of the week I would spend in the office in the Watergate, doing the lobbyist thing, keeping the Navy happy and participating in industry activities, most of which involved the Shipbuilders Council. All of this was interesting.

As I mentioned in the preceding chapter, I now had a proper office, as a tenant of Mike Dyer's law firm, at 600 New Hampshire Avenue, in the Watergate complex. (This was not the notorious Watergate office building – that was the other Watergate office building, around the corner, at 2600 Virginia Avenue.) It was nothing lavish – two private offices and a small conference room, plus a reception area – but it was a base of operations. It now began to get more use, as Steve Minikes and I persuaded Tom Weller to spend more time in Washington. And over the next few years, as Penn Ship gradually slid downhill, Tom had to spend an increasing amount of his time in Washington, negotiating with the Navy and doing his best to reassure our congressional supporters.

We had a gang of congressional supporters. Having started out with just Good Time Charlie Wilson from southeast Texas, I now found myself working with something called the Penjerdel Delegation. This consisted of six senators – John Heinz and

Arlen Specter of Pennsylvania, Bill Bradley and Frank Lautenberg of New Jersey, and Bill Roth and Joe Biden of Delaware – plus about ten representatives from Philadelphia and the other districts in southeastern Pennsylvania, southern New Jersey and Delaware. Add to these the two heavyweight Pennsylvanians on the House Defense Appropriations Subcommittee – Jack Murtha and Joe McDade – and Jack Edwards from Tom Weller's home town of Mobile, Alabama.

Naturally enough, I didn't spend a lot of time with any of the actual members, but when I did, I soon realized that there are two types of politician. There are the ones that look you in the eye, listen to what you say and ask intelligent questions. And there are the ones that don't. No surprise, I suppose.

Regardless of how smart the member is, or isn't, a lobbyist really earns his money by educating the congressional staff. Although shipbuilding is a technical, confusing and complex business, plagued with all kinds of archaic terms and expressions, it is also, fortunately, endlessly fascinating. I spent a lot of time with the ever-changing army of 20-ish Legislative Assistants.

One of the things that the City of Philadelphia did to promote the Philadelphia Navy Yard was run an annual day trip to the yard for congressional staff. Steve Minikes organized this for the City and together we now turned it into a double play: the Navy Yard in the morning and Penn Ship in the afternoon. It worked well: there's nothing like actually seeing a working shipyard to get people involved.

The part of being a lobbyist that involved arguing for or against a particular program, law, regulation, or whatever, was a necessary part of the business and not unchallenging. It would be nice if we didn't have to, but it seems that we do.

The other part of being a lobbyist, however, was highly distasteful and, of all the things I've had to do over the past fifty years, this is the one thing that I would gladly have missed. I am talking, of course, of fund-raising. I thought then and I still think that the system stinks. It's demeaning to everyone involved.

Steve Minikes and I sat down at the beginning of every year and made a list of the members for whose re-election campaigns we thought we needed to raise funds. We would then put sums by those names that depended partly on their influence and partly on what they would expect. Then I had to lean on my colleagues for checks. Sometimes we were told bluntly that if we wanted so-and-so's help, we had better come up with at least X thousand dollars for the campaign. In at least two cases, I was also told bluntly that the member expected us to put subcontract work in his district, which, heaven help me, I actually tried to do, although not very successfully.

Blessedly, there were a few members who actually told us that they saw a conflict and did not want us to contribute to their campaigns. Senator Bill Roth of Delaware was one and Rep. Bill Hughes of New Jersey was another. Good for them, but what a system!

The Shipbuilders Council

In those days, "working the Hill" was something that we did as an industry team almost as much as we did it as individual companies. Every builder and repairer of large ships was a member of the Shipbuilders Council of America – the SCA – the primary function of which was to lobby the Congress and the Administration.

When we had joined the SCA, in 1981, its full-time President had been Ed Hood, who had been there for over 20 years. Ed was a nice man, a knowledgeable man, but no fire eater. He retired in 1983 and was replaced by Lee Rice, another nice man, with an impeccable background in the marine industry, but apparently incapable of ever getting up from his desk and going to war. He was replaced in 1986 by John Stocker, who had come to the SCA from George Sawyer's office at the Navy. Some thought that John was too young for the job, some thought he was too brash and some thought he was just too damn smart for his own good. I thought he was excellent and greatly enjoyed working with him.

In those days, most of the shipyards had a full-time representative in Washington. Almost all these guys had shipbuilding backgrounds, so we became a sort of small club, often lunching or drinking together. It was during this period that we collectively started a group called the Shipyard Forum, which met once a month, for dinner, in a private room in a downtown hotel. Every month we invited a member of the Congress to join us. He was only allowed to bring one staffer with him and he was expected to make a short speech, but it could be on any subject and of any length. After that, each of us could ask him one question: otherwise, there would be no shop talk at all.

These dinners were generally very good value. I'm not sure that they had much business value and they weren't cheap, especially as we all chipped in for an honorarium for the guest. If nothing else, maybe they engendered a warm feeling for shipbuilders. I have to add that the only one that I remember as a complete bust was dinner with Senator Dan Quayle. What a lightweight.

There were endless committee meetings at the SCA. As the representative of one of the smaller companies, I served on more committees than most and spent a lot of time there. In those days, the offices were downtown, on Vermont Avenue, just across Lafayette Park from the White House: as the industry got smaller, economics

forced a move to Arlington, which was a loss in several ways. In addition, the old SCA had a great library and published excellent newsletters and reports. The high point of its activities was the quarterly Board meeting, when all the CEOs showed up. Except mine, that is. Neither Ed Paden nor Tom Weller ever wanted to get involved, so I represented us at Board Meetings as well as all those Committee meetings, often arguing, you may not be too amazed to hear, with my elders and betters, some of whom – Ed Campbell of Newport News Shipbuilding, for example – were not accustomed to having their pronouncements questioned.

The Phase-Out

All this time – 1985, 1986 and 1987 – Penn Ship was sliding downhill. Penn Terminals was getting going, the "Penn 800" was working and we had sold the Engineering and Management building to its tenant, Boeing. Inside the yard, construction of the first two T-AOs was actually progressing quite nicely. Between the T-AO program and our repair contracts, we had between 2,000 and 3,000 people working. Unfortunately, our business plan had been based on a workforce of closer to 5,000 and we were not paying the bills. There were no more big programs coming down the pike. What were we to do?

The Navy was very patient with us. The Navy in Washington, that is, PMS 383, CAPT Bill Pfister, and the Contracting Officers, John Kimener and Harold Hansen. The Supervisor was still being a pain in our rear. Seeing that the situation could only get worse, they forced us to novate the portion of our contract that covered the third and fourth ships to Avondale. From our point of view, this just made the situation even worse than it already was, because it took hours out of our workload and made the first two ships even more costly than they were already going to be. Things just kept getting worse and worse.

It is generally believed that the Navy terminated Penn Ship's contract for cause and that Penn Ship folded. Not so. The contract was terminated by negotiation, something I have never seen, before or since. We floated the first hull and the Navy took possession of it and all the hull modules for the second ship, plus all the material and equipment procured for the two of them. In addition, we gave the Navy a lien on our floating dock as security for the extra cost it would incur in finishing the ships somewhere else.

Everyone in the industry expected the Navy to get Avondale to finish the ships, since Avondale had already built the first four of the class, had our third and fourth ships and had since contracted to build all the remaining ships of the class. But some idiot politicians got involved and the Navy was bullied into assigning the completion of these two ships to George Steinbrenner's Tampa Shipyards. Tampa was even less

qualified than we had been and managed to make a complete mess of it, with the result that the ships were never completed. In retrospect, the Navy would have been better off just paying us what it would have cost to finish them.

Anyhow, Penn Ship was now effectively through and Tom Weller started to sell off the Central Yard as real estate. This was a slow business, which took several years. Several buildings were leased out. The Navy took the big dock. The State took the parking lot and built a jail on it. The main part of the yard was sold to Metro Machine but they never made a go of it and the State took it. If you look at the yard from the air today, using the magic of Google, you see a racetrack. The bulk of that great old shipyard is now Harrah's Chester Casino and Racetrack. Maybe that's what we should have done with it back in 1982: level it and build a casino. We would all be rich today. But we were just simple shipbuilders.

Moving On Again

By 1988, although still Vice President of this, that and the other, I had almost nothing to do. I no longer went to the shipyard and hardly ever went to the Hill. Even going to the SCA had become embarrassing. I spent about two hours every day in the Watergate Health Club, trimming myself down, but the time still hung heavy on my hands.

So, without having much of a business plan, I thought that I would quit and go back to consulting. Tom Weller and his partners were very cooperative, generous even. They gave me the lease on the Watergate office, with the rent paid for the first year, and they retained me to to keep helping them with their projects. Mike Dyer created a corporation for me, imaginatively called Colton & Company, and suddenly, in September 1988, I was on my own.

The arithmetic was neat but purely coincidental. My first decade in the industry had been spent working in shipyards, my second as a consultant and my third back in the shipyard. Now, at the start of my fourth decade, I was a consultant again.

Chapter 13

WASHINGTON DC: COLTON & COMPANY – THE BUSH YEARS

In September 1988, Colton & Company opened for business, operating from the highly prestigious address of 600 New Hampshire Avenue N.W., in the Watergate complex, across the street from the Saudi Embassy and next door to the Kennedy Center for the Performing Arts.

I had a base load of work for my former employers, but this was really make-work stuff, nothing that they really needed, so I knew it could not last for long. I did not have the financial strength to support myself for long without income, so this was the point at which I gave up being a landlord and sold both the house in Beaumont and the house in Annapolis. I fired off letters to practically everyone in my address book to let them know that my services were available, but all this really generated was a bunch of "Good Luck" messages.

Sometimes even a blind hog finds a truffle, however, and before September was out, Colton & Company had been hired by the I.R.S. This was something of a surprise, especially as it was a competitive procurement. We were retained to help the I.R.S. determine if Maersk Line Limited, the owner of five of the Navy's prepositioning ships, was in compliance with the tax laws, particularly the one relating to the residual value of leased assets. This was a great project with which to get the new business off the ground but it also had a secondary and much more valuable benefit: it got me started in the business of valuing marine assets. When I look at the long list of projects that we undertook over the ten-year life of Colton & Company, and again over the past eight years that I've been consulting again, it seems that asset valuation has been one of the two types of project that have kept on coming.

Anyway, I had barely started this job for the I.R.S. when I got a call from George Sawyer. George was now a consultant too, working closely with John Lehman, who was now a Managing Director in Corporate Finance at PaineWebber, in New York City. PaineWebber was interested in Todd Shipyards Corporation, which had recently filed for Chapter XI protection from its creditors, and George was assembling a team of experts to go and take a look at that once great corporation's three remaining shipyards, in Seattle, Washington; San Pedro, California; and Galveston, Texas. But how could I do that and the I.R.S. job at the same time?

I had not been in business a month and already I was swamped.

The answer? Call Fred.

Fred Hillmann

Fred Hillmann, who had briefly been part of the Levingston team when we started the Annapolis operation in 1981, was now working for Booz Allen, in the group there that did management consulting projects for the Navy. I called him and the conversation went something like this:

> TC: What are you doing?
>
> FH: Oh, some boring stuff for Charleston Navy Yard. What are you doing?
>
> TC: Oh, some pretty interesting stuff for the I.R.S. and for Lehman and Sawyer. In fact, I'm swamped. Do you want to come and help?
>
> FH: Sure.

There must have been more to our negotiation than this but that is how I remember it. The amazing thing, which I did not fully appreciate then, was that Fred had all three children in college at that time. He took a huge risk in jumping from the security of one of the world's largest management consultants to the insecurity of one of the world's smallest.

We restructured things so that I owned 75% and Fred owned 25% of the business. Our business philosophy was simple:

- To maximize cash, we paid ourselves $60,000 each in salary;
- At the end of the year, we put the maximum allowable into a SEP-IRA;
- We then split the rest of the surplus 75/25, leaving Colton & Company with only a nominal amount of tax to pay.

In retrospect, I suppose that we might have changed the name to Colton & Hillmann, or something like that, but the thought never came up at the beginning and it might have seemed strange later on. I think that everyone who mattered knew that Colton & Company was Fred and me, although Fred occasionally introduced us by saying "He's Colton, I'm Company".

Colton & Company lasted ten years, my fourth decade in the industry. Throughout that time, Fred and I had lunch together every day, when we were both in town. We discussed everything and I don't believe we ever exchanged an angry word, although there may have been a few stony silences. It was a great relationship.

The I.R.S. and Maersk Line

The Navy's acquisition of 13 prepositioning ships was mentioned earlier. This program had been controversial in several respects, not least among which was that Secretary Lehman and Assistant Secretary Sawyer had introduced the Navy and the Congress to the concept of chartering in. These 13 ships were all leased. The base term for each ship was five years and each lease had four option terms, each of five years, plus an option to buy. There were those in the Congress who didn't like this approach, calling it "Rent-a-Navy", but these were cargo ships, not nuclear submarines. The three groups of shipowning companies involved, affiliates of General Dynamics, Maersk Line Limited – the US-citizen arm of the Danish company – and Waterman Steamship, were taking a significant risk: if the Navy did not exercise its renewal options, they were going to be stuck with some very expensive and not particularly commercially useful ships. Some in the Congress also thought that the shipowners' risk was being covered by some unusually generous charter rates.

The I.R.S. may or may not have been prodded into investigating these deals: I do not know and I tend to doubt it, based on my experience with that agency in the course of this project. In any case, they elected to question Maersk's compliance with the tax laws in connection with these charters, particular the requirement that each ship must be projected to have a residual value and a remaining useful life at the end of the lease that was at least 20% of the original values.

Maersk's five ships had been built in Denmark in the late 1970s and converted to prepositioning ships by Bethlehem Steel. Their values were now several times their commercial value and by the end of the lease they would be close to 30 years old. It was not, therefore, an unreasonable question for the I.R.S. to ask.

One of Maersk's prepositioning ships

In any case, Fred and I did what the client wanted and concluded that Maersk was, in fact, in compliance. The I.R.S. did not pursue this issue further, either with Maersk or with either of the other two companies. In the course of this exercise, we had access to all the details of Maersk's deal with the Navy, however, and were quite impressed by the money that they were making from it. It was interesting to note, later on, that the charter rates on the renewal terms of these leases were quite a bit lower than they had been on the initial term. Whether this was in any way a result of the I.R.S.' diligence, I cannot say.

Todd Shipyards

The I.R.S. project had been quite a start for Colton & Company. This had been a fairly high profile project for a "big name" client. It opened up a line of business that I had never envisaged. In addition, we had got the job in a competitive procurement and our I.R.S. contact reminded us several times that we had not been the low bidder.

The project involving Todd Shipyards, with which George Sawyer sought our help, was much closer to what I had anticipated Colton & Company doing. The team that George had assembled to look at Todd's shipyards for PaineWebber consisted of only four people: apart from George and me, there was Larry French, who had recently retired from being President of NASSCO, and Tony Barrington, who was running JJMA's Transportation Consulting department.

We visited all three shipyards, toured the facilities, grilled the managers, scrutinized documents by the score and generally formed a pretty negative opinion of the company's management. It was incompetent, clueless as to marketing and top-heavy with indirect personnel and costs. In addition, they had pumped enormous sums of money into capital improvements to facilities that they leased from others. They did not deserve to survive and we concluded, in fact, that the best solution to their problem was to sell each shipyard individually to local interests and/or management. We thought that each would have a better chance of survival as a privately held small business than as a division of a publicly traded company. Even this would not be easy, because all three yards were (a) unionized and (b) environmental nightmares. This was a plan that held no appeal for PaineWebber, of course, and our project ended there.

It was interesting to return to Todd's San Pedro shipyard, where my career as a shipyard consultant had started 18 years earlier. It was also interesting, and a bit tricky, from a different perspective. Back in 1982, I had met, quite by chance, a member of the Todd family. Judy Todd was the daughter of William H. Todd, who was a power on Wall Street, grandson of the company's founder and a member of the Board of Directors of Todd Shipyards. I had become very close friends with Judy and had come to know her family. In fact, Bill Todd and I got along famously. It was difficult, therefore, to share my views on the way his family business was being run, but he was not about to let me keep them to myself. He left Todd's board soon afterwards.

There is, unfortunately, no shortage of examples of incompetent shipyard management, not only in the U.S. but worldwide. Todd remains, in my view, one of the most egregious. You could write a book about it, or at least a Business School case study.

Exxon Shipping

As the whole world knows, the "Exxon Valdez" ran aground in Prince William Sound on March 24, 1989. Only a couple of weeks after this event, I received a call from George Knight, my former boss at JJMA, asking if we could do a valuation of a large tanker. Fred and I went to New York to meet with George and a wizard of maritime finance named Steve Gottlieb: we were joined on the phone by a man from Exxon Shipping in Houston. It was made clear at the outset that the subject for discussion was the "Exxon Long Beach", not any other tanker of similar characteristics but greater notoriety. Could we please provide an independent estimate of the fair market value of the "Exxon Long Beach" as of March 25, 1989?

The "Exxon Long Beach"

Well, of course we could and we did.

What was all this about? The federal statute known as the Limitation of Liability Act limits the liability of a shipowner to the post-accident value of his ship, unless the owner himself was at fault or participated in some way in the harmful conduct. Exxon wanted to know what that magic number, the post-accident value of the ship, was. In the event, of course, the company did not choose to maintain that the accident was solely the responsibility of the ship's crew and paid up. It is interesting to speculate as to the scale of the uproar if Exxon had tried to argue that their liability was limited to the value of the ship, which was about $125 million.

This too would have been a pretty impressive project to add to our record if we had not been charged with keeping it confidential. There were two other, very real, benefits for Colton & Company, however: between the I.R.S. project and this job for Exxon, Fred the maritime economist had been able to develop a handy-dandy computer model for calculating the fair market value of a ship under all kinds of operating scenarios and financing arrangements. We were to use model this many times in the years ahead and we are both still using it.

Argent Marine and the LNG Business

The Exxon project had introduced us to Steve Gottlieb, of Argent Marine Services. I have already referred to him as a wizard of maritime finance and the same can be said of his brothers Marty and Jay. They had been, in fact, the brains behind the creation of all those "Rent-a-Navy" deals in the early 1980s. Now Steve was planning to buy three LNG carriers.

One of Argent's LNG carriers, now Shell's "LNG Delta"

One of the biggest fiascos of the 1980s was a project created by El Paso Natural Gas to ship LNG from Algeria to the U.S. and France. They had built 12 ships for this project – six in U.S. shipyards and six in French shipyards. The project had fallen apart, for various reasons that are not relevant to this story, and in 1986 MARAD had been forced to take title to the six US-built ships, which had been the beneficiaries of Title XI financing. Three of these had been built by Avondale but had failed their acceptance trials and MARAD sold them to our old friend C.C. Wei for conversion to bulk carriers. The other three had been built by Newport News and were fully ready for service when they were delivered in 1978, but there was no market for them and they had been laid up in Narragansett Bay. After numerous false starts, MARAD had sold them at auction in 1989 to Steve Gottlieb's company, Argent Marine, for only $15 million each. This price was widely ridiculed as a give-away and MARAD tried again. The second time around, Steve only got two of the three ships and had to pay a whopping $18 million each, but the sale closed and they were moved to a new lay-up site, in the James River. Now he wanted them valued.

Actually, we valued these two ships three times. Thank you, Steve! First, on this initial occasion, in 1990, we valued them to establish their fair market value, so that Argent could look for buyers. Then, a few years later, we estimated the fair market value of the company, Argent Marine Services, the only assets of which were the two ships. We did this because Steve was being sued by his ex-wife, who was maintaining that he had been concealing the true value of his assets. Then, in 1996, we valued them yet again, when Argent finally sold them to Shell Transport & Trading. Shell, which is very smart when it comes to shipping, bought seven laid-up ships at ridiculously low prices at that time: all are now fully employed.

Bollinger Shipyards

Back in Washington, I was visited one day in 1990 by another of Dyer & Ellis' sub-tenants. Don Fierce was a lobbyist, a rabid Republican but in those days lobbyists did not take sides the way they now do. One of Don's clients was a small shipbuilder in south Louisiana called Bollinger Machine Shop. I had never heard of these people but, except for my short time building trawlers, my entire career up to this point had been concerned with large oceangoing ships and drill rigs.

Bollinger Shipyards, as it is now called, is a family business on the banks of Bayou Lafourche, just south of Lockport and about an hour's drive south of New Orleans. They had started out as a machine shop; progressed from there into being a repair yard; and then become a leading builder of offshore supply boats. When the bottom fell out of the offshore market in the 1980s, they had taken a chance and gone after some Coast Guard work. Now they were building a series of 110-foot patrol craft, ultimately numbering 49 boats.

In 1990, however, the company's CEO, Donald T. ("Boysie") Bollinger, had been told by senior officers in both the Coast Guard and the Navy that the proposals Bollinger submitted in response to their RFPs were considered by the responsible Government employees to be among the worst they had ever seen. Boysie had asked Don Fierce to find someone who could solve this problem and Don had come to us.

Bollinger's shipyard on Bayou Lafourche

For the next eight years, until we closed Colton & Company down, Fred and I wrote all Bollinger's Government proposals. Actually, "wrote" does not quite describe what we did. We were really proposal managers, organizing and coordinating the work, but, because clear English is a rare commodity in U.S. shipyards, especially one full of Cajuns, we also edited every section of every proposal, rewrote many of them and created some sections from scratch.

The first proposal we worked on was for the Navy's coastal patrol ships, the 14-ship "Cyclone" class, and Bollinger won, which must have gone a long way toward

securing us in our role as proposal gurus. I cannot count how many more proposals we worked on but our other great triumph was winning the contract for the Coast Guard's "Protector" class of 87-foot patrol boats, which has now reached 75 boats.

Bollinger Shipyards was Colton & Company's best customer, and not only in terms of total dollar value and the splendidly prompt way in which they paid their bills. They were, and still are, a delight to work with, at every level. Among all the many, many shipyards I have visited, I've never seen one with the positive attitude and friendly atmosphere that they have down there in Lockport. Now, if we could just teach those Cajuns to speak English.

The City of Newport News

Later that year, a friend in the Hampton Roads area let us know that Newport News Shipbuilding was getting into a fight with the City of Newport News over property taxes. We thought that the City might need a little help in such a tussle so we called them and soon thereafter we found ourselves part of a multi-company team headed by a commercial property appraiser from Richmond. The team was charged with valuing the shipyard for the purpose of revising its assessment for property taxes and our role was to calculate functional and economic obsolescence.

This was a fascinating assignment, not only because it involved the always fascinating Newport News Shipbuilding, but also because it broadened the scope of our valuation experience. Now we knew how commercial and industrial appraisals were done and from this point forward, we took care to use the procedures of the American Appraisal Institute, even though we were not members.

Newport News Shipbuilding

I had not been in Newport News' shipyard since my time there in 1970, so it was startling to see how much money they had sunk into that place, not only in building what they called the North Yard but also in rebuilding much of the older facilities. But substantial parts of it were lying idle and others were seriously underutilized.

We did our part for the team, including writing an analysis of the shipyard's situation in the industry and its prospects for future work. The dispute was settled out of court but one of the terms of the settlement landed squarely in our lap. The shipyard and the City agreed that, as part of the valuation process, a review of the shipyard's business position would be done every five years. So we did it again in 1995, Fred did it on his own in 2000, while I was otherwise engaged, and we did it jointly once again in 2005. Next year, maybe, we will get to do it for a fifth time. Why not?

Bath Iron Works

We had barely got done with Newport News when an almost identical project came up. Bath Iron Works, (BIW), had got itself into a similar dispute with the City of Bath, Maine. The City had looked at Bath's Reagan-era-induced workload, assumed that the good times would continue indefinitely and took this to be an opportunity to raise the company's property taxes. The shipyard, naturally enough, disputed this.

BIW's CEO at that time was a local lawyer called Buzzy Fitzgerald. We had met at Shipbuilders Council meetings and he had heard me going on about the decline of our big shipyards. So he hired Colton & Company to provide an independent estimate of BIW's enterprise value, knowing that my view of the company's future prospects would be pretty gloomy. This document would be used in support of Bath's dispute with the City.

Bath Iron Works

The valuation itself was straightforward enough, plus I got to make several trips to Bath, which is a great shipyard in an excellent small city, full of delightful people. What I had not anticipated was that I would have to testify as to my findings in front of a State tribunal, held in Bath City Hall and televised live to everybody in the surrounding area, most of whom had a family member working at the shipyard. By the time I got through telling the tribunal that BIW had nowhere to go but down, I was about as popular in southern Maine as the proverbial skunk at a picnic. But, in case you were wondering, BIW's employment, which had hit a high of just over 10,500 in 1990, the year before this hearing, has declined every single year since then, is now below 5,000 and, sadly, is still headed downwards.

Philippine National Oil Company 1992

The following year we got another of those wonderful projects that seem to just drop out of the sky. We were called by the division of Price Waterhouse, the big accounting firm, which provided consulting services to the U.S. Government. They were supporting the Manila office of the U.S. Agency for International Development, (USAID), and needed specialized assistance. The project involved the privatization of the PNOC Dockyard & Engineering Company, (PDEC), which was a subsidiary of the Philippine National Oil Company, (PNOC). Off to Manila!

I thought that PDEC was a nice little shipyard. It had a Bardex 12,000-ton shiplift and transfer system, with plenty of on-shore berths and well equipped shops. It also seemed to be well managed, with a productive workforce.

The PDEC shipyard in Batangas

We told PNOC that they would have no trouble selling it at auction, which is what the Philippine Government had directed PNOC to do, we told them what it was worth and we told them who the probable bidders would be, the Singaporeans being at the top of our list. We were right on the money: they sold it to Keppel for slightly more than our estimate.

This project went off so well that we were then asked to do the same thing for PNOC Shipping & Transportation Company, (PSTC), which was PNOC's tanker fleet. This was a very different kettle of fish. Some of the ships were ancient and collectively it was a very mixed bag. We told PNOC that they would get more from liquidation than from an auction, but they did not agree. They tried twice to auction the fleet without getting any bidders at all. Today, 16 years later, they are still trying.

I enjoyed working on these projects. I found the Philippine people to be delightful and I was particularly impressed by the ordinary working folks. The problem in the Philippines was clearly not the workers but the managerial classes. I think it must take at least a generation to expunge a tradition of corruption.

Chapter 14

WASHINGTON DC: COLTON & COMPANY – THE CLINTON YEARS

In 1993, Colton & Company managed to get itself evicted from its fancy digs in the Watergate. Our landlord, Dyer & Ellis, had grown, become Dyer, Ellis, Joseph & Mills, and expanded from one floor to two. Although they still had room for a miscellaneous collection of Republican lobbyists, they apparently no longer had room for a small firm of consulting engineers and we were asked to leave. We weren't exactly pushed out but I got the clear impression that one of the gang of resident lobbyists in particular fancied our space. Well, it was easy to see how Haley Barbour, later Chairman of the Republican National Committee and now Governor of Mississippi, might have been looked on as a more desirable tenant than Fred and me.

So we moved to new offices, just across the Potomac River, in the Rosslyn section of Arlington, Virginia. Our new digs were on the 18th floor of 1700 N. Moore Street, which is the building over the Rosslyn Metro station. Instead of having a view of the Saudi Embassy, we now had a panorama, stretching from Georgetown in the west, across downtown DC and up the Mall to the Capitol, with a glimpse of the Marine Corps Memorial down to the right. It was much more space than we would ever realistically need, with four offices, four desks in a bull pen, a reception area, a kitchen, a print room and a conference room cum library, but we usually had part of it sublet. The other nice thing about it was the restaurant downstairs, the Tivoli, which we termed the company cafeteria and where we lunched on most Fridays.

We started out in Rosslyn by celebrating our fifth anniversary. In honor of the occasion, we produced and distributed a highly distinctive coffee mug – over-sized and bright red. They can still be seen in Washington and, one of these days, you will see them on "Antiques Road Show". And since we forgot to put a date on them, they are almost literally timeless.

The other big event of 2003 was that the Clintons moved into the White House.

I don't believe that anyone in the maritime industry had previously thought of the former Governor of Arkansas as one of our friends but it turned out that he had actually taught maritime law and knew something about our business. He started well by appointing Congressman Les Aspin to be Secretary of Defense: Aspin's staff, with the help of the Shipbuilders Council, had been working on a plan to revitalize the shipbuilding industry, with money from the Navy. With Aspin in the Pentagon, this program seemed to have better odds of becoming law. Then, good heavens, the new President appointed a really competent person, Al Herberger, to be Maritime Administrator. Our hopes rose.

DARPA and the MariTech Program

Early in 1993, we got a call from Dr. Reuven Leopold, one of the giants of naval engineering, asking us to come to a meeting at the Defense Advanced Research Program Agency, better known as DARPA. Fred and I went, and discovered that the topic was shipbuilding: specifically, how to revitalize the industry. The only other person whom we knew at this meeting, apart from Reuven, was Bob Schaffran, who was still the Program Manager for the National Shipbuilding Research Program, (NSRP). Everybody else seemed to be a nuclear engineer, some of them still on active duty: that's DARPA for you. We covered very little ground that morning but found ourselves under contract anyway. Over the next few months, we put in a lot of time with DARPA and, on October 1, 1993, we saw the results, when the White House released a document entitled "Strengthening America's Shipyards: A Plan for Competing in the International Market". Two months later, this plan became reality, when the "National Shipbuilding and Shipyard Conversion Act of 1993," was enacted into law.

The five ingredients of the plan were:

- Ensuring fair international competition;
- Eliminating unnecessary government regulation;
- Assisting international marketing;
- Financing ship sales through Title XI loan guarantees; and
- Improving commercial competitiveness with MariTech.

It was this last bullet that we had been involved with and the Defense Authorization Act of that year committed the Navy to investing $220 million in the MariTech program over the next five years. With dollar-for-dollar participation from industry, we were looking at a $440 million program, quite a step up from the old NSRP, which had gone virtually unfunded in the Bush years.

At this point, we could probably have stayed on as a support contractor for the program, but both Fred and I thought that there would be more work for us on the other side of the table, helping the smaller yards first to get MariTech contracts and then to perform. Over the next two years, we wrote a bunch of MariTech program proposals, for a variety of clients, including Bollinger Shipyards, Bender Shipbuilding and Swiftships. The most satisfying of these projects was probably that for Bender. They had never participated in the NSRP and it took a lot of persuading to get them to venture into the new program, but the outcome of their first project was the construction of a state-of-the-art prefabrication facility, which is still one of the finest in the industry and which resulted in major improvements both in the quality of their work and in the productivity of their workforce.

Margaret Doyle and the C.C.A.

In our first year in Rosslyn, we increased our employment by 50%. Well, we hired Margaret Kaigh Doyle and became a three-employee company. A graduate of the U.S. Merchant Marine Academy at King's Point and an extremely strong-willed individual, Margaret basically hired herself. We did not so much interview her as she interviewed us. We were not surprised, later on, to discover that none of her friends would have expected anything different.

We didn't regret it. Margaret brought her own client with her and took care of him with absolutely no help or interference from either Fred or me. The client was the Chemical Carriers Association, (the C.C.A.), which was the international (not just US-flag) association for operators of chemical carriers, the big players being Stolt-Nielsen and Jo Tankers. Margaret was its Executive Director: she organized its meetings, wrote its newsletter and represented it on the Coast Guard's committees. We provided office space and services, and paid her salary, in return for which we got a regular and generous monthly check.

Somewhere along the line, we also paid for Margaret to get a Master's degree in environmental engineering from Penn State. Neither Fred nor I can ever remember agreeing to do that, but Margaret could be very persuasive.

Shortly before we closed Colton & Company down, Margaret's husband moved to a job in the Boston area and Margaret moved her CCA office to their house up there. Later on, she turned it into a section of INTERTANKO and went to work for that organization. Her presence in our offices during those years enlivened our lives but we never got any work out of the CCA's members.

Marine Log Conferences

Because of the promise offered by the National Shipbuilding and Shipyard Conversion Act of 1993, the leading U.S. maritime magazine, Marine Log, initiated an annual conference on shipbuilding, which was held in Washington. In their infinite wisdom, they asked me to be its moderator and I filled that role for ten years. Being something of a showman, I reveled in this. Our conferences were never boring. Unfortunately, the promise of the 1993 Act was never fulfilled. Indeed, it got a bit depressing as the disaster of Newport News Shipbuilding's Double Eagle tanker program unfolded and as there were few signs that the industry was making any progress at all. The only positive result was, I suppose, the shipyard improvements that were financed by the expansion of Title XI, but even some of those ultimately amounted to little more than pouring money into a hole in the ground.

CIGNA, Derecktor and Lockheed

Later that first year in our new offices, we were hired by CIGNA, the big insurance company, to help them in a lawsuit. This was a very intriguing case involving two shipyards, both with famous names. The first was Robert E. Derecktor of Rhode Island, Inc., (REDRI).

Bob Derecktor, a colorful character in many ways, was best known for the beautiful yachts he built at his shipyard in Mamaroneck, New York. Seeing a business opportunity in the 1980s, he had leased the old destroyer base at Middletown, Rhode Island, near Newport, and developed a shipyard there. After building nine medium-endurance cutters, (WMECs), for the Coast Guard, he had secured a contract to build eight large tugs, (LTs), for the Army. In addition, he had made an offer to buy Lockheed Shipbuilding's small yard in Savannah, Georgia, which had a contract to build 35 landing craft, (LCUs), for the Army.

All three of these contracts required performance bonds and REDRI had provided them. The bonds had been issued by CIGNA. The problem arose when one of the losing bidders for the Lockheed yard in Savannah objected to the Army that REDRI's financial situation was not such that it was credible that they could have obtained a bond of the size required. The Army's Contracting Officer called CIGNA, whose response was, in essence, "What bonds?"

It turned out that the bonds for all three programs were, in fact, genuine CIGNA bonds, but CIGNA alleged that they had been issued by the CIGNA representative in Providence, Rhode Island, without CIGNA's knowledge and that this individual had pocketed the premiums. As a result, the Army terminated its contracts with REDRI, the CIGNA representative was prosecuted and jailed, and everyone sued everyone else.

We were retained by CIGNA, acting through their lawyers in Providence, to provide expert support. The level of effort required was considerable. Before the advent of proper document scanning equipment, this type of work was highly labor-intensive, because the documents in the case were always in hundreds of boxes with a hopelessly inadequate index. We brought in Charlie Reinhardt, who had worked with me at JJMA, to manage this effort and he brought in additional help. As a result, this project made 1993 a great year for Colton & Company. In the end, however, all these cases were settled. Halter Marine took over the Army's LT contract and moved it to Moss Point Marine, in Escatawpa, Mississippi: REDRI folded. Halter also bought Lockheed's Savannah yard and moved the Army's LCU contract to Moss Point Marine as well: Lockheed got out of the shipbuilding business.

OPIC and the Shipyard in Panama

Our next shipyard project came to us courtesy of our friends at Price Waterhouse, now reborn as PriceWaterhouse Coopers, (PWC). They had been retained by the Overseas Private Investment Corporation, (OPIC), to provide advice on the feasibility of financing some facility improvements at the Panama Canal Commission's shipyard in Balboa.

This shipyard had been built at the same time as the Panama Canal itself had been built and its large dry-dock was built to essentially the same specifications as those of a canal lock, except that it only had a gate at one end. The pump rooms, the machine shops and all the other buildings were all of that vintage: it was like being in a museum.

The shipyard in Panama – Astilleros Braswell

The shipyard had had numerous tenants, none of whom had had much success. Now it was operated by Astilleros Braswell, a company affiliated with the U.S. ship repair firm in South Carolina owned by the Braswell family. Braswell wanted to bring the shipyard up to date. What they were asking for was not excessive and made sense even in the context of the limited market for that shipyard. Panama was considered, at that time, to be a high-risk country, which was why this project was in the hands of OPIC rather than the Export-Import Bank.

I toured the yard, grilled Butch Braswell and his management team, met at some length with the Panama Canal Commission folks, and then came home and wrote a short report endorsing the application. PWC put my report in their format, stuck their cover sheet on the front, and sent it in. OPIC approved the project and made the loan. The project went ahead without mishap. I did a little research and discovered that PWC got paid about three times what they paid us, but, realistically, we would not have got this contract on our own.

Educating Fred Mertz

What with MariTech and the arrival of Margaret Doyle and the three-person CIGNA project, 1993 was something of a bonanza year for Colton & Company. If we could keep this up, Fred and I thought, we might actually need all that office space and we might even get moderately rich. Anyway, it was at this point that we initiated our brilliant training program.

The idea was that we would take a graduate of one of the state maritime academies, pay him (or her) a nominal salary, pay for him to go to business school at nights, and then kick him out into the world. He would then, we hoped, go on to glory and everywhere he went he would be a salesman for Colton & Company. If the process took two years and we started a new kid every year, we would always have two inexpensive assistants in the office.

So we let all the state maritime academies know that we wanted one of this year's class and we got quite a lot of applications. We interviewed half a dozen. The one who got our attention was Fred Mertz, a graduate of the New York State Maritime Academy at Fort Schuyler. It wasn't so much his interview performance that grabbed us as that he asked if he could sit in our library and read some of our consulting reports. He did this for several hours and we could hear him saying things like "This is great!" and popping up occasionally to pester Margaret with questions.

We hired Fred, who had, of course, to be referred to as "Young Fred" from then on. He was a great member of the team, got his MBA from the American University and went on to work in the transportation consulting division of Booz Allen. After a few years of that, however, he went back to Buffalo to work for his father, which wasn't quite what we had had in mind. We did not repeat the experiment.

Living on Capitol Hill

Flushed with all this success, I reinvested some of my earnings in my 1885-vintage house on Capitol Hill. The previous owners' original renovation had been very much in the style of the 1960s-era hippies that they had been – a sunken living room, for example, a master bathroom that was all black except for a bright red circular tub and a mirror on the ceiling, and a guest bathroom that had a Victorian claw-foot tub that was too small for anything but children and dogs. I started out with the intention of just re-doing the living room and the two bathrooms, but, like so many people in this situation, I got a tad carried away and invested in such luxuries as a built-in, remote-controlled Bang & Olufsen sound system and several linear miles of additional book shelves. I spent much more than I had intended but consoled myself with the hope that I had significantly increased the value of the house.

It was while this was under way that I got politically involved, after a fashion. On the next block, there was an abandoned three-story apartment building which was the only structure on the west side of its block, totally surrounded by the parking lot of Capitol Hill Hospital. The hospital wanted to raze it but some of the neighbors wanted to preserve it. I was on the side of the hospital: I could not see that it had any architectural value and I thought that, if it made economic sense to renovate it, someone would have done so by now. I went to a few public meetings and discovered that matters such as this were not decided by the D.C. Government, as you would expect, but by the Capitol Hill Restoration Society, (CHRS), acting on behalf of the D.C. Government. The D.C. Government, it seemed, had more than enough to deal with – true enough – and had outsourced its responsibility for enforcing the historic preservation regulations.

So I joined the CHRS and volunteered to serve on its Land Use Committee. I immediately found myself, effortlessly, to be one of a handful of local residents who effectively ruled Capitol Hill, from the Capitol east to Lincoln Park and from H Street in the north to M Street in the south. Such power! If you lived in that area, which is designated the Capitol Hill Historic Preservation District, you could not so much as repaint your front door without our permission. This was both interesting and fun, especially when a particular applicant turned out to be a member of the Congress, unused to being told what he could or could not do to his house.

This experience also opened up the neighborhood to me. I had not previously met more than my immediate neighbors but now I met all kinds of folk and found what a microcosm the neighborhood was. Senators and congressional staff, of course, but also schoolteachers, bus drivers, lawyers, you name it. Not boring.

North Carolina's Ferries

Another project that dropped on us out of the blue was for the State of North Carolina. The Ferry Division of the NCDoT operates one of the largest ferry fleets in the U.S. As part of its operation, it has its own repair yard in Manns Harbor, near Roanoke Island. The Ferry Division had recently started a systematic renewal of the fleet. It had already built some new boats and had several more under construction, all in Gulf Coast shipyards. Now the member of the State Legislature with Manns Harbor in his district wanted to know why the Ferry Division was spending all this tax money in Gulf Coast shipyards when it had a perfectly good shipyard right there in Manns Harbor. The Ferry Division had attempted to explain the limitations of the Manns Harbor yard, but without much success, so they had agreed to get an independent expert to look at the situation and provide advice.

The Outer Banks of North Carolina are truly beautiful, if a bit exposed to hurricanes, and there are some great small coastal towns, with a lot of excellent restaurants. Naturally, I had to do a tour, get a feel for the different types and sizes of ferries, etc. It was a tough job. I liked their shipyard but it was very cramped, with no room for expansion and difficult to get to, even in their own ferries. It would have been very hard to build ferries there. In addition, their costs were very high, because everyone was a state employee. I had no difficulty endorsing the Ferry Division's position.

Tampa Port Authority

In 1993, George Steinbrenner's shipyard in Tampa, all that was left of his family's once great shipbuilding empire, filed under Chapter XI of the Bankruptcy Act. Tampa Shipyards, Inc., had over-reached badly by taking on the contract to complete the two oilers that had been started by Penn Ship. It had then made life worse for itself by winning the contract to build a new class of large, twin-hulled ocean surveillance ships, (T-AGOS). The Tampa shipyard was, and still is, primarily a repair yard and most rational observers would have said that they were not qualified for either of these contracts. They had performed well building the Navy's T-5 tankers, however, although they had had to employ a "virtual shipbuilding" approach, subcontracting the forebodies – cargo section plus bow – to Avondale and the superstructures to Alabama. And the U.S. Representative from nearby St. Petersburg was, and still is, Bill Young, who is a power on the Appropriations Committee.

The shipyard in Tampa – now Tampa Ships

Although Tampa Shipyards had actually filed for bankruptcy protection in 1993 they had kept on operating the yard. Now they proposed to sell the assets and transfer the lease on the shipyard to an affiliate of a Greek dry bulk shipping company called Delphi American Maritime, for $5 million in cash and the assumption of $18 million in debt. The Greeks had formed an entity called Tampa Shipbuilding Company and had come up with a plan to use the newly expanded Title XI program to build some bulk carriers for their parent. Their landlord was Tampa Port Authority, which now came to us for technical help.

The problem was complicated. There was an unsolicited competing proposal from International Ship Repair & Marine Services, (ISRMS), a small local ship repair firm, but the Greek proposal was much more attractive on the surface and the Port Authority, as a public agency, could not turn it down without good reason. So they went with the Greeks, who spent several million dollars on the yard and then walked away. Steinbrenner got his money, the yard was a better yard but we had to find another tenant.

The second time around, there were again two bidders – the unfortunate loser from before, ISRMS, and a joint venture created by Tommy Bender, the owner of Bender Shipbuilding, and Aaron Hendry, the owner of another local ship repair firm, Gulf Marine Repair. All the sympathy lay with ISRMS, but, once again, the competing proposal was more attractive and impossible to turn down.

The new tenant, which was called Tampa Bay Shipbuilding & Repair Company, Inc., was successful and continued to invest in the facility. The yard was recently sold to Edison Chouest and renamed Tampa Ships: the new owners intend to move it into the business of building offshore service vessels.

www.coltoncompany.com

By 1995, the internet had been invented – a DARPA project – and web sites were becoming relatively commonplace. Seeing it as an effective form of marketing, we tasked Young Fred with creating one for Colton & Company. He did, and www.coltoncompany.com was born. It was, indeed, an effective marketing tool and still is. It is remarkable how much work we got from it. The original web site grew rapidly in those early days, as we added pages of hard data, which we saw as a means of attracting people to the site.

Another Thing about Living in Washington

There are Government departments that make you groan and there are Government departments that make you cheer. One of the latter is, I think, the National Park Service.

I have always been a voracious reader of history, especially of colonial and military history. It was not until I moved to Washington, however, that I came to realize what a huge gap there was in my education. Somehow or other, I had completely missed out on the Civil War, although I suppose it is not too surprising that English schools don't teach the kids much about things that didn't directly involve the United Kingdom. But here in Washington, it was all around us and I resolved to catch up. The breadth and depth of the available literature is truly astonishing. After reading a

couple of overall histories, I started reading more detailed studies of the individual campaigns and battles in the northern theater, in chronological order, of course. After reading about each one, I would visit the individual battlefields on the weekends, from Bull Run through Appomattox. The way in which these historic sites have been preserved is truly marvelous and the skill and dedication of the park rangers is just terrific. Maybe I'm easily impressed, but in Europe it's almost impossible to find any battlefield that's older than World War One and most of the World War One and World War Two sites are more notable for their cemeteries than anything else.

Jered Brown Brothers

Later that year, a project that didn't involve a shipyard came our way. Jered Brown Brothers was a marine manufacturing company in Brunswick, Georgia, a wholly owned subsidiary of Rolls-Royce. The Brits had decided to dump it and Colton & Company was retained by a company called Branford Castle, Inc., an affiliate of the Wall Street investment group, Harlan Castle, to help them do their due diligence, with a view to buying it.

Jered had started out in Iron Mountain, Michigan, and moved to Brunswick in the early 1990s to get access to lower-cost labor. They made high-quality electro-mechanical equipment, primarily as vendors to defense contractors: their big money-maker was the big elevator that is used on aircraft carriers. Their products and activities were entirely consistent with those of the Brown Brothers division of Rolls-Royce, so it was easy to see why Rolls-Royce had bought them but not so easy to see why Rolls-Royce now wanted to sell them. Anyway, we spent some time there, went over their numbers and their business plan in detail, and concluded that they ought to be able to make a go of things, although it might be a struggle. Branford Castle closed the deal but it was never really satisfied with the company's performance and they sold it again in 2005.

The Grand Bahama Shipyard

The following year, 1996, saw two major shipyard projects come our way, both courtesy of George Sawyer. The first was for Grand Bahama Port Authority, (GBPA), which turned out to be not so much a port authority as a property management company.

Back in 1955, when the Bahamas were still a British colony, an American lumber man named Wallace Groves had signed a 99-year lease on 80 square miles of the western half of Grand Bahama Island. This was subsequently expanded to 230 square miles, essentially most of the western half of the island, and Groves was joined in the investment by a British businessman, Charles Hayward, and a Maltese lawyer, Edward

St. George. This was the property that GBPA managed and the central thrust of its development was the Freeport Harbour Company, which, up till then, had consisted mostly of a rather scruffy cruise ship terminal.

At the time that Colton & Company was hired, the big Hong Kong-based port operator, Hutchinson International, was building the first phase of a giant container trans-shipment terminal in Freeport. We were tasked by Freeport Harbour Company, first, to do a market analysis and feasibility study for a ship repair facility; second, to develop a conceptual design; and, third, to help find an operator.

This was a project that was a pleasure to undertake: shipyard-related projects rarely involve such amenable surroundings. It was a real pleasure to fly into Freeport and to stay in a resort hotel at Port Lucaya.

In addition, the study itself was pretty straightforward. The location was ideal, given the almost complete lack of non-U.S. repair yards in the region and the pattern of the shipping trades in the area. The only problem would be people. For management, Freeport Harbour Company thought that it had Lloyd Werft lined up to operate the yard, but Lloyd Werft was having financial problems and backed away: we ended up with A. & P. Ship Repair, from Britain, although both Carnival Cruise Lines and Royal Caribbean Cruise Lines subsequently invested in the yard and it is now run by joint-venture management. Even trickier than finding managers was the need for skilled hourly paid personnel: the operators found them in Cuba and the Bahamian Government set up a form of revolving visa system for them.

Grand Bahama Shipyard

One of the "small world" features of this project was that they bought their biggest dock from Cascade General, of Portland, Oregon: it is the one that was built in the 1970s for the Port of Portland, in one of my earlier projects.

Philadelphia Naval Shipyard

Our second big project in 1996 was for Philadelphia Industrial Development Corporation, (PIDC), an agency of the City of Philadelphia, although we were initially a subcontractor to J. F. Lehman & Partners.

PIDC's primary task was to put the Philadelphia Naval Shipyard, (PNSY), to work. Back in 1993, when the yard was the Navy's largest and had about 7,500 employees, the Base Closing Commission had sentenced it to be closed. The regional congressional delegation, led by Senator Arlen Specter, fought this decision all the way to the Supreme Court, but got nowhere and the yard had finally closed in 1995.

Now PIDC had the task of doing something with this huge great empty facility and they hired John Lehman's firm to do a re-use study. The fact that Lehman was a distinguished Philadelphian and a former Secretary of the Navy may have had something to do with this choice.

Of course, Colton & Company did the study.

Philadelphia Naval Shipyard

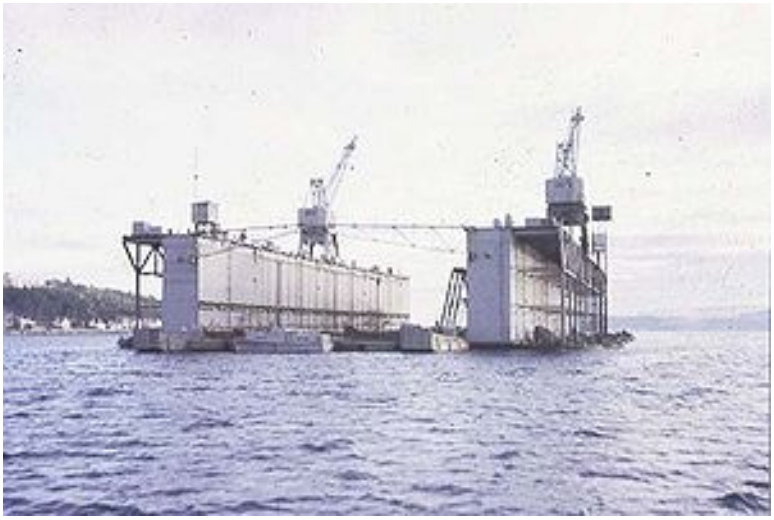
Politics were all over this project. We could not tell PIDC that the shipyard had no commercial value, although this was especially true since their rearguard action to save it from closure had effectively ensured that the workforce was long gone. So we told them that its highest and best use was as a shipbuilding facility, although this would require considerable capital investment. And we told them to get a foreign shipbuilder of proven competence, not a U.S. shipbuilder, to operate it. Top of our list of candidates was the Norwegian group, Kvaerner, at that time the best shipbuilder in Europe.

PIDC followed our advice, I mean John Lehman's advice, and started discussions with Kvaerner. They also hired Colton & Company directly, to help. So we continued to work on this project for another year, very much behind the scenes. It was interesting stuff, because some of Kvaerner's ideas were excellent and some were loony. In the end, however, the yard was rebuilt and is now pretty successful, although it took a lot longer and cost a lot more than was originally expected.

The Port of Brownsville's Dry Dock

Both the Grand Bahama project and the Philadelphia Naval Shipyard project ran all through 1997 and into 1998. In 1997, however, we also worked on an interesting assignment for the Brownsville Navigation District, way down south, on the border with Mexico.

The big shipyard in Brownsville is called AMFELS. Back in the 1970s, it had been owned by Marathon LeTourneau and had been a prodigious builder of offshore drilling rigs. Marathon had sold it to local interests in 1985 but these folks had done nothing with it. Then, in 1991, it had been bought by Keppel FELS, of Singapore, renamed AMFELS and was back in the drilling rig business. Seeing the success that Texas Drydock was having in Port Arthur, using an ex-Navy battleship dry-dock leased from the Port of Port Arthur for the dry-docking of drilling rigs, the Port of Brownsville thought that it should do the same. So the local congressman, Representative Solomon Ortiz, got the Navy to transfer another redundant battleship dry-dock to Brownsville.



Brownsville's dry-dock - formerly the "Los Alamos" (AFDB 7)

Our assignment was to coordinate the transfer and make sure that the Port got everything it was supposed to get. This turned out to be more work than any reasonable person might have expected. The dock in question, the "Los Alamos", (AFDB 7), had been active until quite recently, serving at the U.S. Navy's submarine base in the Holy Loch, in Scotland. Now it was in the custody of MARAD, in the James River Reserve Fleet. We had no problem with MARAD but the Navy was strangely uncooperative: we concluded that they just did not think that this was an appropriate use for the old dock and they dragged their feet. It was a battle to ensure that all the operating manuals and files and drawings and spare parts and everything else that belonged with the dock were, in fact, on board when she was finally towed out for the trip to Brownsville.

But towed out she was and has been a productive part of the industry ever since, particularly since the offshore industry came alive again a few years later.

Restlessness

It should be clear both from this chapter and from the preceding one that Fred Hillmann and I had a great time being Colton & Company. In this chapter and the previous one I have described some of the major projects that I was involved in, but there were many more that Fred handled without my interference and others that are too small or too uninteresting to mention. We were rarely unoccupied and we were never bored. We never had an unprofitable year, but then we only paid ourselves modest salaries. Unfortunately, not only was I not getting rich, I was not making any progress toward securing my retirement.

So, when John Dane came along and offered me about three times what I was making at Colton & Company to go and work for Halter Marine Group, in Mississippi, I accepted.

Fred was not too happy about this, and who could blame him, but he was financially secure and I wasn't. I could not see any alternative.

I sold my interest in Colton & Company to Fred and walked away. Fred talked our subtenant into taking over the lease on the office space, sold the furniture and equipment, and put most of the files and the library into long-term storage. He then went home to suburban Maryland and set himself up as Hillmann Maritime, Inc., which he still is. I sold my beautiful house on Capitol Hill to the Chief Counsel of the Senate Finance Committee and moved to Gulfport, Mississippi.

My fourth decade in the industry had come to an end and once again I was back in a shipyard.

Chapter 15

MISSISSIPPI: HALTER MARINE GROUP AND THE FGH FIASCO

Although Harold Halter had started his first shipyard back around 1951, the company that I joined in March 1998 had only been created two years earlier, in July 1996, when Trinity Industries split its marine group into two, keeping its "brown water" yards, i.e., those that built towboats and barges for service on the inland waterways, and spinning off its "blue water" yards, i.e., those that built other types of vessel. The newly structured public company, Halter Marine Group, Inc., (Halter), was traded on the American Stock Exchange and operated eleven small shipyards:

- Halter Moss Point, in Moss Point, Mississippi, which mostly built high-value mid-sized ships for both governmental and commercial customers;
- Halter Lockport, in Lockport, Louisiana, which mostly built tugs and offshore supply boats;
- Halter Gulfport, in Gulfport, Mississippi, which built barges;
- Halter Panama City, in Panama City, Florida, which was in mothballs;
- Equitable Shipyards, the former Higgins shipyard on the Industrial Canal in New Orleans, Louisiana, which built aluminum patrol craft;
- Trinity Yachts, which was wholly enclosed inside the Equitable facility and which built megayachts;
- Gretna Machine & Iron Works, in Harvey, Louisiana, which built and repaired oceangoing barges;
- Moss Point Marine, in Escatawpa, Mississippi, which built tugs, offshore supply boats and smaller governmental vessels;
- Gulf Coast Fabrication, in Pearlington, Mississippi, which built large barges;
- Halter Gulf Repair, the former Alexander Shipyard on the Industrial Canal in New Orleans, Louisiana, which was a repair yard; and
- Halter Pascagoula, the former Chicago Bridge & Iron shipyard on Bayou Casotte, in Pascagoula, Mississippi, which had been a rig builder but was now being developed to build commercial ships and large barges.

After its spin-off, Halter had done an IPO and, flush with all that nice new money, had gone on something of a spending spree.

In May 1997, Halter had acquired Texas Drydock, Inc., the rig builder and repairer which, ten years earlier, had emerged from the bankruptcy of Levingston Shipbuilding and which now operated six shipyards in southeast Texas, including the former Bethlehem yard in Port Arthur, with its ex-Navy battleship dry-dock. Texas Drydock was renamed TDI-Halter and was operated as the company's Rigs Division.

In October and December 1997, Halter acquired AmClyde Engineered Products, Inc., in St. Paul, Minnesota, the world leader in heavy-lift marine cranes, and three small local manufacturers of winches and similar marine machinery – Utility Steel Fabrication, Inc., Fritz Culver, Inc., and McElroy Machine & Manufacturing. These four companies were operated as the company's Engineered Products Division.

In the course of late 1997 and early 1998, Halter also acquired seven more small shipyards:

- A McDermott property on the Industrial Waterway in Gulfport, Mississippi, which was redesignated Halter Gulfport Central, but which was never put to any use at all;

- Another McDermott property on the Industrial Waterway in Gulfport, Mississippi, which was redesignated Halter Gulfport Three Rivers, but which was never put to any use at all;

- Another McDermott property, in Sabine Pass, Texas, which was redesignated TDI-Halter Sabine Pass and used as a topside repair facility;

- Bludworth Bond's ship repair yard in Houston, Texas, which was redesignated Halter Houston;

- Bludworth Bond's ship repair yard in Texas City, Texas, which was redesignated Halter Texas City;

- Calcasieu Shipyard, a repair yard in Calcasieu, Louisiana, which was redesignated Halter Calcasieu; and

- Trinity Marine's bargebuilding yard in Orange, Texas, which was the old Consolidated Steel shipyard, adjacent to Levingston Shipbuilding, and which was redesignated TDI-Halter Orange.

This rapid growth had been accompanied by corresponding increases in sales and in numbers of employees, but without much improvement in the way the corporation was being managed. Most of the 28 shipyards and manufacturing operations did their own thing, with little centralization of services or even much management oversight.

So, in March 1998, I was brought in as Senior Vice President, Production Support, charged with coordinating and managing all design and engineering; planning and production control; procurement and material control; and cost estimating.

It immediately became apparent that the real challenge in this area was in the Vessels Division. The Engineered Products Division was run by Dick Juelich, a thoroughly capable, experienced and popular manager, who needed absolutely no help from me, as he was quick to make clear, although he did it very nicely. Similarly, the Rigs Division was run by Don Covington, who had been a colleague of mine in the Levingston days and was, like Dick, a thoroughly capable, experienced and popular manager, who needed absolutely no help from me.

The Vessels Division, however, was a mess, in a variety of ways.

It also became apparent that this was why I had been hired: I might be a Corporate VP, but my job was essentially focused on the Vessels Division. This impression was reinforced by the fact that there was no office for me in the corporate headquarters: I was expected to make my home in the Halter Engineering building, along the road.

John Dane, Dan Mortimer and Rick Rees

The Vessels Division had lots of problems but one of the bigger ones was really common to the company as a whole. It was the corporate leadership.

Halter's CEO was John Dane. John was well known, widely admired and much liked in the industry. He had started out with Harold Halter but had acquired Moss Point Marine and set up on his own. There, he had broadened the company's horizons by taking it into the market for small government-owned ships, including tugs, logistic ships and landing craft, and had done well. When he had had difficulty competing for government contracts that required performance bonds, he had sold Moss Point Marine to Trinity Industries and had taken over management of Trinity's Marine Group, leading it through a period of rapid growth. Now he was the Chairman, President and CEO of a public company with 7,000 employees.

Halter's COO was Dan Mortimer. Dan had started out as a fitter at Seatrain Shipbuilding, in the former Brooklyn Navy Yard. He and a partner had acquired Gulf Coast Fabrication in 1981 and sold it to Trinity in 1994. Dan was popular with the workforce, because he was good at telling them how wonderful they were, but when

you got right down to it, he was remarkably ignorant of modern shipbuilding practices. His idea of managing was to show up, give a pep talk and leave. The speech that he kept making to me was to the effect that "We're going to make a lot of money in this company." At the time, I assumed that he meant that the company was going to make a lot of money but later on I was not so sure. It seemed to me that he had got to where he was with bullshit rather than with brains.

Halter's CFO was Rick Rees. Like John Dane, Rick had started out with Harold Halter and had been Tom Weller's finance guy when Tom had acquired Penn Ship. Rick certainly knew what he was doing – one of the smarter finance guys I've ever known – but his experience of managing a public company and of dealing with Wall Street analysts was very limited.

In fact, none of these three seemed to have much knowledge or experience of what was involved in running a publicly traded company. All three had been fine when running small, privately owned companies, but now they had created a monster and the monster was out of control.

If you think these judgments are harsh, read on and see how the saga unfolds.

Petrodrill

One of the Petrodrill rigs

I got to Gulfport in the third week of March 1998 and the alarm bells began ringing in the first week of April. I went looking for Dan Mortimer and was told that he and John Dane were in Rotterdam, signing a contract. What sort of a contract? A contract to build two semi-submersible drilling rigs for a Dutch company. Uh-oh. No semi-submersible had been built in the U.S. in over 15 years: why would any rig operator in his right mind come to us? Worse was to come. The Dutch company involved, Petrodrill, was apparently signing an identical contract – same prices, same deliveries – with South Korea's Daewoo Shipbuilding & Marine Engineering, one of the best shipbuilders in the world. How could anyone imagine for a moment that Halter could compete with Daewoo?

This was the point at which I should have called Fred, begged forgiveness and headed back to Washington, but I didn't.

The Petrodrill contract was, indeed, a nightmare and it essentially bankrupted Halter. It should never have been executed in the first place and the fact that it was is a direct reflection on the capabilities of the company's senior management. What was even worse was that we had an opportunity later on to buy our way out of this mess but we passed, because Dan Mortimer persisted in the belief that we could both perform and make a profit. In the end, the successor company, Friede Goldman Halter, of which more later, rejected the contract in the Chapter XI process and Petrodrill pulled the incomplete rigs out of our yard, for completion elsewhere. It is hard to tell what those rigs really cost because there is no useful information in the Halter records and Petrodrill was privately held.

Halter's Engineering Department

I have always liked to think that I don't rush into things. I have seen a number of newly appointed managers who start out by firing a bunch of folks and I don't much care for that approach. It certainly gets everyone's attention, which may be the point, but they don't always fire the right people and in any case, firing people should be the last resort. When I got to Halter's Engineering Department, however, it was immediately apparent that a change in the department's management was urgently needed. The Engineering Department had necessarily grown with the company and its workload, and now numbered around 250 people, making it easily the biggest shipyard engineering department outside the "Big Six" naval shipbuilders.

Halter's VP, Engineering, was (and is) a very good engineer, but he was not so well equipped with managerial skills and almost completely lacking in leadership and personal communication skills. So I divided the department in two, creating a Preliminary Design Group and a Production Engineering Group, and put the VP in charge of Preliminary Design. He did not like this much but just about everybody else in the building was ecstatic. Apparently his managerial skills had been even worse than I had thought.

Of course, the down side of this move was the need to find someone to run the Production Engineering Group, and in the mean time, that would have to be me. Fortunately, the second level in Halter's Engineering Department knew what it was doing and did not really need me for anything except getting between them and the other management people. Fortunately again, it was not long before I was able to persuade Joe Comer to join us. Joe had been Bender Shipbuilding's VP, Engineering, and he was perfect for the much larger Halter operation – highly competent, unflappable and easy to get along with.

The Alaskan Ferry

The big headache for Halter's Engineering Department in 1998 was the Alaskan ferry project. The Halter Moss Point shipyard was building a 400-foot ferry for the State of Alaska. This ship, the *Kennicott*, was designed to carry up to 499 passengers and up to 80 cars, and was to be fully SOLAS-compliant, making her the first passenger ship built in the U.S. for ocean service since Ingalls built the *Brasil* and the *Argentina* in the 1950s. She was also designed to serve as a command and logistics ship in the event of some form of disaster or an oil spill.

The engineering requirements of this project were significant, but not anything that we could not handle. It seemed to me that a good part of the problem lay in managing the customer, who was very difficult to deal with. In addition, there was no doubt that the company was going to lose money on this contract, but there was not much that Engineering could do about that except get the drawings to the yard.

The oceangoing ferry *Kennicott*

In any case, the *Kennicott* got built and has been in service now for over ten years, not only ocean service but also international service, since she calls at Prince Rupert, British Columbia. She's a fine ship and a very impressive achievement for such a small shipyard. Halter lost money on the contract, about 10% of the contract price, which might have been worse and was, in any case, a drop in the bucket compared to the loss on the Petrodrill contact.

The Boatbuilding Culture and the ABC Program

The real challenge in Halter's Vessels Division was the fact that we had all these small shipyards and each acted as if it were an independent entity. Although we had a central Engineering Department, each yard wanted its engineering done its own way, not any externally imposed way. Each yard did its own purchasing, generally not very well: most delays were due to late delivery of materials. And each yard did its own planning, that is, if it did any planning at all. One of the most egregious examples of this culture involved Gulf Coast Fabrication, the yard that had been sold to Trinity Marine Group by Dan Mortimer and his partner, Fred May. Gulf Coast Fab. was apparently exempt from any corporate oversight or regulation of any kind, even including safety inspections and drug testing.

I have no doubt that we could have made huge improvements in all these areas without any outside help, but our senior management had already decided that we would be guided in this endeavor by KPMG Management Consulting, with whom they had executed a $7 million consulting contract. A special project had been created for this purpose, called ABC, which was short for A Better Company. Was that not an inspired choice of name? All the people assigned to this project by KPMG were nice, intelligent and hard working, but not one of them had the slightest clue about shipbuilding. The whole thing was ridiculous and a horrendous waste of money.

We made progress, however. Within a couple of years, we had introduced Ship Constructor and other software systems, and the quality and consistency of our production engineering had improved enormously. We even persuaded one of the yards to install prefabricated pipe spools instead of using the 1940s approach of onboard cutting and fitting of standard lengths of unbent pipe and fittings. We adopted Primavera for planning and production control, and were gradually extending its use. And we had established a central purchasing function that bought all bulk materials and all high-value machinery and equipment. But, just as we were really beginning to make progress, the Petrodrill contract, the monster that ate Halter, started to create cash flow problems, dragging the Vessels Division and the Engineered Products Divisions down and drawing attention away from any investment in management systems and procedures.

Living in Biloxi

When I moved to Gulfport, I rented a boring little apartment close to the office, while I looked around for something permanent. At dinner one evening at Richard and Susan McCreary's house, I was stomping around admiring the high ceilings, the archways, the big windows, the rounded corners, etc., when Richard said, "The house next door is exactly the same and it's for sale." Two months later, we were neighbors.

The house in Biloxi

My new home was a 3,000-sq.ft., three-story, stucco house with tin roofs, verandas and balconies, in a sort of quasi-Caribbean style. It had five bedrooms but only two bathrooms, so I converted two of the bedrooms into a library, with floor-to-ceiling shelving and big leather couches. It overlooked the Gulf of Mexico, without being directly on the beach, and was close to several congenial hang-outs. Most particularly, I was surrounded by some excellent neighbors, all of them available for a party at a moment's notice.

The Millennium Cruise

At the end of 1999, I went on a cruise for the first and probably the last time in my life. This was no ordinary cruise, however, because it was the millennium cruise of the *Queen Elizabeth 2*. Back in 1982, three of my London friends had conceived the idea of a group cruise to celebrate the millennium, booked well in advance and imaginatively financed, in order to achieve maximum value. A hundred or so congenial souls, from all over the world, were invited to invest in a fund to pay for first-class cabins on the QE2's millennium cruise.

The fund was organized as a modified tontine, a form of investment fund created in the 17th century that is generally illegal. The key thing about a tontine is that you can't withdraw. If you miss a payment, your investment is forfeited. If you die, your investment is forfeited. The only way you can recover your investment is by surviving until you are the only remaining investor. The reason that they are illegal is that this structure obviously incentivizes the investors in a tontine to eliminate each other.

Our tontine was not quite that dramatic, but if you missed a payment or died or otherwise dropped out, your investment was forfeited.


The millennium cruise ship

The first thing that the organizers did was to execute a contract with Cunard Line guaranteeing that we would take 50 cabins on the QE2's millennium cruise, wherever in the world it might be and whatever it cost, or on the QE2's replacement, if the old lady herself were no longer available. And, oh yes, we would be allowed to bring our own wine, with no corkage charge. Cunard got taken over twice in the ensuing 17 years, but our contract stayed in place.

Apart from giving Cunard a down payment, the whole of the first levy was spent on wine. Remember that this was in 1982, for a party that was scheduled for the end of 1999. With subsequent levies, the contributions of those who died or dropped out, and some intelligent investments, the end-cost to each of us was about half the ticket price, and that's not counting the value of the prodigious quantity of very fine wine that we managed to consume.

I forget how many people originally signed up: there were several drop-outs but we ended up with close to 100 in our group. It was a very congenial crowd and the whole event was a total riot. We were not very well behaved, for a bunch of people in their fifties. We insisted, for example, on parading to dinner each evening, from the Yacht Club bar on the poop deck all the way forward to the Britannia Grill, led by our own kilted piper. The Cunard crew was great, considering what a trial we must have been for them, and the other passengers were remarkably tolerant.

Yantai Raffles and Belleli

One interesting feature of the Halter experience was our relationship with the Singaporean entrepreneur and rigbuilder, Brian Chang, who had sold his interest in the Promet shipyard in Singapore and was developing a new yard, called Yantai Raffles, in the city of Yantai, on Bohai Bay, in northern China. This relationship had been initiated by TDI-Halter's VP Marketing, Bob Fogal, who had known and worked with Brian for decades.

The deal was that Halter would be prime contractor for the Yantai yard's initial projects and would provide engineering services and marketing assistance. As the yard became self-sufficient, Halter's role would be reduced but we would have the opportunity to invest in the company.

The CNOOC derrick/pipe-lay barge

The first projects were offshore supply vessels for Tidewater, which were no big problem. The first big project, which was much riskier, was the construction of a 4,000-ton derrick and pipe-laying barge for China National Offshore Oil Corporation, (CNOOC). This project was reasonably successful, although the Yantai yard was not really ready.

Halter's management was uncomfortable with the Yantai relationship, however, and passed up the opportunity to invest. I was with the TDI guys on this one: I could see no way that we could lose. The Chinese shipbuilding industry was growing fast and Brian Chang was a brilliant, tireless entrepreneur. Ten years later, Brian proved us right: he sold 30% of the company for $566 million.

Although not interested in Yantai, our brilliant management was, however, interested in investing in Belleli, a fabrication yard in Taranto, in Italy, that specialized in the construction of offshore production platforms. I was sent to take a look, reporting back that, in my opinion, the yard was a dump. (The trip was interesting, however, as I had never before been south of Naples and would like to have been able to spend more time there.) In addition, I expressed the opinion that doing business in Italy would be much more trouble than it would be worth, especially since Taranto was in a region of very high unemployment, and that Belleli had no long-term prospects in an industry that was increasingly concentrated in the Far East. But our leaders went ahead and bought 35% of the company, almost immediately regretting it. As predicted, Belleli did not last much longer.

The Non-Merger and the Merger

By the beginning of 1999, Halter was in serious trouble, almost entirely created by the Petrodrill contract but not helped by another Rigs Division contract, to build six Lake Maracaibo drilling barges, a product line with which we had never previously had any difficulty. The Vessels Division and the Engineered Product Division were doing fine, busy and profitable, if more than somewhat handicapped by the increasing shortage of cash.

In April 1999, management began discussion of a business combination with Friede Goldman International, (FGI), apparently thinking that in some magical way this might solve our cash flow problem. The fact that FGI had its own cash flow problem did not seem to present an obstacle to this plan, at least in the minds of our fearless leaders. My view, and that of several other senior managers, was that such a merger would be analogous to two drowning men holding on to each other in the forlorn hope that each would be kept afloat by the other. The first reports from those who participated in the discussions were conclusive. They said that we would be crazy to merge with FGI, because FGI was in worse shape than us. If we could hold on for six months, we would be able to buy FGI's assets at bargain prices. So, no merger, thank goodness.

But within a month, we were back in discussions again and this time an agreement was reached. The two companies merged, becoming Friede Goldman Halter, Inc., (FGH). FGI's Chairman, J. L. Holloway, became Chairman and CEO of the new

company and John Dane became Deputy Chairman and COO, with an agreement that, two years later, Holloway would retire and Dane could take over.

FGI had been started in the 1980s as Ham Marine, in a relatively small yard on the Pascagoula River, just south of the Ingalls Bridge. It had grown in parallel with Halter and its history had some similarities. It had acquired the world-renowned firm of naval architects, Friede & Goldman, and changed its own name in order to trade on that fine company's greater fame. It had acquired a shipyard in Newfoundland that I knew well – Marystown Shipyard, formerly Newfoundland Marine Works – which had expanded to become a conversion and repair facility for offshore rigs and platforms. It had acquired a French manufacturer of winches and offshore equipment, Brissoneau & Lotz Marine, (BLM). And it was building a new shipyard in Pascagoula, immediately adjacent to Halter's yard there.

The most significant parallel between Halter and FGI, however, was that FGI also had a killer contract. It too was for the construction of two semi-submersible drilling rigs, only in this case, the bare hulls had been built by Dalian Shipyard, in China, and FGI's challenge was to outfit and complete them. Like Halter with the Petrodrill contract, FGI had woefully underpriced this contract and was now both bleeding cash and in a huge dispute with the customer. And FGI's customer, a Norwegian company called Ocean Rig, was, like Petrodrill, a new venture, with no track record and no other assets.

This was essentially why the merger was such a bad decision. Each of the two companies certainly needed to merge with somebody, but, in both cases, that somebody needed to be a company with lots of cash and, if possible, experienced management. Of course, a merger like that would not be favorable to the weaker partner's management, and both Halter and FGI were run by people with big egos. Most of the rest of Halter's management opposed this merger, but the triumvirate that ran the company, supported by our rubber-stamp Board of Directors, went ahead anyway.

So we combined the two companies' Rigs Divisions and the two companies' Engineered Products Divisions and became one company. We also pushed a few people out or down and created one management team, in which I was still a corporate officer, but with a new role. I became Senior Vice President, Business Development, a position that had not existed in either of the parent companies: part of this job was coordinating the various marketing activities and part was pursuing new business activities. In fact, it was basically the job I had had at Capital Marine, back in the 1980s.

Coordinating the various marketing activities was relatively simple.

I have already observed that Dick Juelich did not need any help with the Engineered Products Division's marketing. He took the French companies under his wing and I left them alone. The only coordination required involved joint participation in trade shows.

The Vessels Division had two totally separate Marketing groups, each of which presented a bit of a challenge.

The guys in Commercial Marketing certainly knew how to sell boats but there were two aspects of their operation that I set out to change. The first was that they seemed to take a shot at every opportunity that came into range, regardless of size, value or any other criterion. They chased everything. As a result, the Estimating Department was permanently swamped and did not have the resources available to put as much effort into individual projects as would have been desirable. So I instituted a bid/no bid procedure to eliminate the crazy projects and a much more rigorous bid review procedure: not quite as rigorous as the procedure we had used at Levingston, maybe, but a lot better than anything previously seen at Halter.

The other Marketing group in Halter's Vessels Division was concerned with Government Projects. This group was harder to get a grip on, because it was run as if it were a secret society. Fortunately, it appeared to be well run and was, as a result, little cause for concern, although its leader had all the personality of Attila the Hun.

Finally, there was the Rigs Division. The two companies had both stationed their marketing personnel in Houston, for obvious reasons, and they were now merged, although there were times when the new operation seemed more like two operations sharing the same office space. Here too it was clearly necessary to force them to be more selective in their choice of projects to pursue and then to put more effort into the development of their pricing and technical proposals. This was an uphill struggle and we made some progress, but I never really achieved what I was aiming for.

A more interesting challenge in this connection involved dealing with the design firm, Friede & Goldman. This was a New Orleans-based company, although, since becoming part of FGI, it had started a small group in Houston, sharing space with the Marketing department. The FGH management now proposed to close the New Orleans office and move everybody to Houston. This made sense, given Houston's dominant place in the world of offshore exploration. I got the assignment of making it happen. This was not quite as traumatic as one might have expected, and it also gave us the opportunity to replace F&G's President. The company went from

strength to strength after the move and continues today as a world leader in its field, still with the President that we installed.

The task of pursuing new business activities was more challenging than that of coordinating the marketing activities, because, of course, we did not have any money. There were two projects that had some potential but came to nothing, although both could have been major cash generators.

First, we tried to form a joint venture with a shipyard in Brazil. The Brazilian government was planning a large-scale expansion of its offshore industry and wanted as many as possible of the necessary rigs, platforms, boats and tankers to be built in Brazil. As a result, the Singaporean offshore yards were looking at setting up in Brazil. If we wanted to participate, we needed our own base in Brazil.

Second, we tried to buy Kvaerner Maritime – now Moss Maritime. Kvaerner Maritime was a Norwegian firm of naval architects with an amazing track record in rigs, LNG carriers and government projects. It would have been a great fit with Friede & Goldman.

Neither of these efforts had a chance, however, because FGH was in financial deep water from Day One.

Additional Nightmares

My problems were, however, as nothing compared to some parallel developments.

From the start it had been apparent that J. L. Holloway and John Dane did not get along too well. The idea that J. L. would be Chairman for two years and then turn it over to John Dane was soon fraying at the edges and in January 2000, John Dane quit, taking a very nice severance check and Trinity Yachts with him. He was replaced by John Alford, who had been with FGI before the merger. Alford was a nice guy but a man of almost no discernible talents: he was known around the office as the "Ritalin Kid". This appointment was no improvement.

After John Dane left, it was only a matter of time before Rick Rees left too, as Rick's relationship with J. L. had been even more strained than John Dane's. He was replaced by Bob Champagne, a competent financial guy from one of the big accounting firms. Bob was not allied with any of the insider cliques, which should have been an advantage for a CFO but in effect meant that he wasn't really tuned in to the multitude of strange things that were bubbling away beneath the surface. FGH was now essentially being run by Holloway's team.

There was worse. During this highly stressful period, when we were trying to get the new company on to an even keel, the FBI had been quietly investigating what appeared to be a complex fraud at Gulf Coast Fabrication, the shipyard that had been sold to the Group by Dan Mortimer and his partner, Fred May, and that was mysteriously exempt from any other managerial oversight. The FBI was handling this because a U.S. Government contract was involved – the construction of a barracks barge. The investigation was kept under wraps because it was deemed to be critically important that nobody should know about it until all the evidence needed to get convictions had been secured. Finally, it all blew apart and at Christmas that year, just before the indictments were issued, Dan Mortimer committed suicide. Five people, including Dan's partner and one of his sons, were indicted and all were subsequently found guilty. Another mess.

Bankruptcy

All through the second half of 1999 and 2000, the company's financial condition continued to deteriorate and relations with the two companies for which we were building those semi-submersibles, Petrodrill and Ocean Rig, deteriorated in parallel. Every project in every division was suffering from the shortage of cash, which inevitably led to delays in the delivery of material and equipment, and to more unhappy customers. There were those of us who thought that the best thing to do would be to file for protection under Chapter XI, in order to be able to reject the two killer contracts. We thought, probably over-optimistically, that we might be in and out in less than a year.

But the concept of Chapter XI was anathema to our leaders, particularly to J. L. Holloway, who owned a lot of FGH stock. In fact, he forbade the use of the expression "Chapter XI" anywhere on the premises. It increasingly seemed that Mr. Holloway's personal interests might not be exactly aligned with the company's interests and many of the senior managers became increasingly restless, but the Board of Directors appeared oblivious. What J. L. wanted, the Board gave him. The only Board member who quit was Jerry Goldman, a great naval architect and a fine man, who must have rued the day that he had agreed to let J. L. use his name.

News of this restlessness among the management eventually reached the ears of the Board of Directors, however, and in early April 2001, a member of the Board polled all the corporate managers for their opinion on what the company should be doing. We told him. Because some of us colluded in advance of this poll, I know that top of the list of urgent actions for most of us was the need to get J. L. Holloway out of there.

On April 18, 2001, FGH finally filed under Chapter XI of the Bankruptcy Act. On May 1, 2001, the Board held an emergency meeting and decided to keep Mr. Holloway as Chairman and CEO. I walked out that day, as did Bob Champagne, the CFO. Enough was enough.

In just over three years, from March 1998 through April 2001, I had been in more yelling and screaming arguments than in my entire 40 years in shipbuilding up to then.

Goodness knows there have been plenty of stupid decisions made by shipyard managers in the U.S. over the years but few companies could have made so many in such a short space of time as did Halter, FGI and FGH.

Of course, the saga continued without me. Far from reorganizing and emerging from Chapter XI, the company was systematically liquidated. FGH's stockholders, vendors and employees were all royally screwed, especially those with 401(k) plans, while the lawyers and the bankruptcy consultants all did very nicely.

The individual pieces of FGH are almost all doing just fine under their various new owners. No surprise, really, as the individual units were mostly good businesses.

The Vessel Division's shipyards were sold piecemeal:

- First, the repair yards were sold as a block to Bollinger Shipyards: they are all doing well, although what had been Halter Gulf Repair, the old Alexander shipyard on the Industrial Canal, was essentially destroyed by Katrina;

- Trinity Yachts was sold to John Dane and two partners, together with the lease on Equitable Shipyards: it has done brilliantly and is now the industry leader in megayacht construction;

- Halter Panama City was sold as real estate but it is now part of Eastern Shipbuilding, and busy building boats again;

- Halter Pascagoula, Halter Moss Point, Moss Point Marine, Halter Lockport, Gulf Coast Fabrication and Halter Gulfport, the last including the two never-used Gulfport facilities, were all sold to a company called VT Systems, which is the U.S. subsidiary of Singapore's ST Engineering, Singapore's largest defense contractor and the parent company of ST Marine. Of these:

    - The first three now constitute VT Halter Marine, which is firmly established as one of the leading mid-sized U.S. shipbuilders;

- Halter Lockport, which had been stripped of all its machinery and equipment, sat idle for some time before being sold to Thoma-Sea Boatbuilders: it is again building tugs and supply boats;

- Gulf Coast Fabrication was sold to a local investor but has never been put back to work;

- In Gulfport, the corporate office building, the Engineering building and the two never-used ex-McDermott facilities were all sold soon enough but the shipyard itself sat idle until it was finally sold to Trinity Yachts after Katrina damaged their New Orleans yard.

The Rigs Division was sold to Signal International, a company formed for this purpose: it is doing very well, both in Mississippi and in Texas.

The Engineered Products Division – essentially AmClyde and Brissoneau & Lotz Marine – was sold to the Norwegian company, Hydralift, and is now part of National Oilwell Varco.

Finally, the design firm, Friede & Goldman, was sold to Uralmash, a large Russian engineering and construction company, and is now doing better than ever, still managed by the team that FGH put in charge – one of our few good decisions.

One might well ask why these businesses could not have done well under FGH's ownership, if they can all do so well under their present ownership. It's a good question. It couldn't possibly have been anything to do with the competence of the management, could it?

Chapter 16

MISSISSIPPI AND FLORIDA: SLOWING DOWN

If it seems to have been somewhat impetuous to walk out of Friede Goldman Halter, as I did on May 1, 2001, it really wasn't. Although I had not given much advance thought to what I might do for a living, I had been a consultant before and there was no reason why I couldn't do it again. So I did.

Being a consultant from the kitchen table in a house on the beach is quite different from being a consultant from a desk in an office in Washington DC. For one thing, you don't need such old-fashioned paraphernalia as jackets and ties at the kitchen table. Indeed, you hardly need anything except a computer. I liked it.

It was remarkable how soon I was back at work. The news of my departure from the dreaded FGH seemed to have spread like the proverbial wildfire and almost immediately I was busy again. There were no big jobs, on the scale of designing the world's largest repair yard, but there were plenty of useful, challenging tasks.

Among the projects that I tackled in the first two years were business plans, market analyses, facility re-use plans, a short history of U.S. shipbuilding (for the Office of Naval Research), ship valuations and , together with Fred Hillmann, the quinquennial review of Newport News Shipbuilding's business prospects, for the City of Newport News.

One project that was of more than passing significance was for the Department of Justice. They needed expert help with their suit against Northrop Grumman Newport News for allegedly fraudulently charging the cost of commercial engineering work to government contracts. It appeared that about $72 million in engineering for the shipyard's disastrous "Double Eagle" product carrier construction program had been charged as overhead, with the result that the cost was spread over every contract in the yard, almost all of the value of which consisted of Navy programs.

The Department of Justice hired both Fred Hillmann and me for this project and we spent a good part of the summer of 2002 in the federal office building in downtown Norfolk, going through the usual endless supply of boxes and boxes of poorly indexed documents and enjoying the pubs in the revitalized old city. We wrote an expert report and I was deposed as an expert witness, but the case was settled only a day or two before the trial was set to start.

ConocoPhillips

This pattern of multiple small projects changed dramatically in the summer of 2003, however, when I was retained by ConocoPhillips, (COP). From then until the spring of 2006, close to three years in all, I worked almost exclusively for COP, settling into a routine of flying over to Houston early on Monday morning and returning home on Thursday evening. And, because it made no economic sense to stay in a hotel and to rent a car every week, I rented a rather dire little furnished apartment close to the Houston office and bought a BMW Mini for local transportation.

The project, called Qatargas 3, was a joint venture of COP, with a 30% investment, and Qatar Petroleum, with 70%. It was one of a series of similar projects which would make Qatar the second largest producer of LNG and the largest operator of LNG carriers in the world. I had the grand and glorious job title of Senior Advisor, Shipbuilding Strategy, my role being, first, to help develop the acquisition strategy and then to assist in negotiations with the shipyards.

One of the Qatargas LNG carriers

This turned out to be the biggest project I have ever worked on, both in the size of the project itself and in the scope of work required of me. It was also enormously satisfying, in the professional sense, and a lot of fun. The Marine Group at COP was a very congenial crowd: they knew how to do a thoroughly professional job without taking themselves too seriously. I loved it. In the course of the three years of working on this project, I visited Doha several times. Present-day Doha is not even remotely like the city which I remembered from my last visit, in 1976: it now seems to be a model of what an Arabian Gulf city can be – not too gloomy for Westerners but not a sink of iniquity either. I also visited the big three South Korean shipbuilders – Samsung, Hyundai and Daewoo – a wonderful experience for someone as frustrated with the incompetents in U.S. shipyards as I was, and an experience made all the more enjoyable because I was on the customer's side of the table for a change.

In the Marine Group, the first, or, in oil industry parlance, "Pre-FEED", phase of this project was largely concerned with fleet planning. (FEED stands for Front End Engineering and Development: "Pre-FEED" could be described as a project feasibility study.) In other parts of the forest, teams were working on the offshore production facilities, the liquefaction plant, the loading terminal, the discharge

terminal and the reliquefaction plant. At that early stage, the intention was to move the LNG from Qatar to Freeport, Texas. The design approach was classic, considering multiple parametric variations and ending up with an optimum ship, which we called the "Super-Flex", of which we would need a fleet of eleven. This name was selected because, although it would have a capacity of 228,500 cubic meters, about 50% more than the current standard design of LNG carrier, it could still be accommodated by all the major existing or planned LNG import terminals. The Super-Flex would be powered by slow-speed diesels, although the entire world fleet of LNG carriers at that time was powered by steam turbines. And instead of burning the boil-off as fuel, as conventional, steam-powered LNG carriers do, our ship would have a reliquefaction plant on deck, so that the boil-off could be turned back into cargo.

During this phase, we also prequalified shipbuilders and developed a strategy for procuring the ships themselves. This was not too difficult. In 2004, there were only eight builders of LNG carriers. The two Europeans were much too expensive and the three Japanese did not want to build such large ships, leaving us with the three big Korean shipbuilders, Hyundai, Samsung and Daewoo.

By the end of 2004, Pre-FEED was complete and we took the project through COP's rigorous project review procedure, emerging the other side with a multi-million budget for the FEED phase.

We had barely started on FEED, however, when the rules of the game changed. Up until then, we had been steaming ahead on the assumption that the Qatargas 3 project was a stand-alone project. Now it appeared that Qatar Petroleum had decided that, at least as far as the shipping requirements were concerned, a single project team would manage all seven of its new round of LNG projects. In five of these seven projects, ExxonMobil was Qatargas' partner and its team – the Qatar Ship Acquisition Team, or QSAT, pronounced Q-Sat – was already in place. COP and, later, Shell, which was the partner in Qatargas 4, were invited to participate in the QSAT.

ExxonMobil had also, of course, developed their own designs for the ships they needed. Because their five projects encompassed other routes besides that from Qatar to the U.S. Gulf, they had developed a pair of designs, the size of which bracketed our single design. Their "Q-Flex" had a capacity of about 215,000 cubic meters, while their "Q-Max" had a capacity of about 270,000 cubic meters. Like us, they had gone for slow-speed diesels, but this was no surprise, since all these ships were too big to be steam-powered. They had not chosen to reliquefy the boil-off, but they accepted our arguments for this and incorporated the concept in their designs.

The single most interesting part of the whole project then began, at least as far as I was concerned. The plan was to negotiate a "slot reservation agreement" with each of the three Korean shipbuilders, covering all the requirements of all seven projects. As each project approached the conclusion of its FEED phase, the slots could be taken up, at pre-negotiated prices and construction schedules. The twist was that, at this stage, no individual project knew exactly how many slots, for what ship sizes, it would need. What we did know was that the total number of ships would be at least 70 and potentially as many as 90, and that the total value would be $20-something billion. The Koreans were somewhat taken aback by our approach, and who can blame them, but the magnitude of the business was irresistible.

It took many weeks and multiple meetings, some in Korea, some in Qatar and some in London, but we ended up with three slot reservation agreements. There were minor differences, but the essence of each agreement was that:

- Each shipyard quoted a base price, as of a specified base contract date, for each of four designs – ExxonMobil's Q-Max and Q-Flex, COP's Super-Flex and the shipyard's own standard design for a conventional ship of about 170,000 cu.m..
- Each shipyard identified the slots in their construction schedule that they would hold open for these projects, in each case specifying the latest contract date and the corresponding delivery date for each design.
- Each shipyard identified the escalation rate that would be applied to their base prices to get to the prices applicable on the specified contract execution date.
- Each shipyard identified a formula for allowing for the impact on their base prices of any changes in exchange rates.

When we had completed this process, we found that we had reserved up to 120 slots: since we would need no more than 90, this gave us tremendous additional flexibility.

The whole process of developing and negotiating these agreements was extraordinary: I do not believe that there has ever been a deal like this, before or since.

Qatargas 3 was the fourth of the seven projects, so we had to wait while the first three went through the contracting process, but in late 2005 it was our turn and in January 2006 we executed contracts for the construction of ten LNG carriers. Three Q-Maxes and one Q-Flex would be built by Samsung, three Q-Flexes by Hyundai and three Q-Flexes by Daewoo. The total value of these contracts was close to $3 billion.

The Qatargas 3 project ended for me at this point. All these ships were delivered on schedule and without any problems. As I write, in mid-2009, the rest of the Qatargas 3 project is more than a year behind schedule and most of these very expensive assets are sitting at anchor off Fujairah, waiting to be put to work.

Katrina

On August 29, 2005, while I was in Houston, a witch called Katrina ate my house.

I had known the storm was coming, of course, and I had taken all the usual precautions before leaving for Houston. I think that it's safe to say, however, that no one anticipated the extent of the destruction that was caused by Katrina. The next morning, along with all my neighbors and tens of thousands of others, I was the proud owner of an empty lot. Everything was gone, leaving almost no trace beyond a concrete slab.

After the storm

In retrospect, I blame myself for not taking more than the usual precautions. I don't mean in preparing for the storm: in that respect, I did what most people did and there was not much more that I could do. But I could have and should have loaded up the car with some of the more portable valuables.

Frustratingly, I could not return for quite a while, because the local airport was closed and road access was impossible. So I remained in Houston and depended for information on contacts with people who had stayed. I filed a claim with my insurance company, of course, but so did thousands of others, so I was not too surprised when the designated point of contact kept telling me, first, that they were "reviewing my claim" and, later, that they were "waiting for the engineer's report". It took them eight months to get around to telling me that my claim had been rejected.

So I joined the other 18,000 policy holders in Mississippi who had to file suit against their insurance companies. I was in good company here, because the list included U.S. Senator Trent Lott, U.S. Rep. Gene Taylor, and most of the local lawyers. Thank goodness, I was not broke and still had a job to do and an office to go to, so I could survive until a resolution could be reached. I cannot begin to imagine what it must have been like for all those who lost not only their homes but also their jobs and still had to make their mortgage payments and feed their families, in a community with no functioning schools or hospitals.

It is also absolutely mind-boggling, is it not, that 18,000 policy holders, in Mississippi alone, had to sue their insurance companies to get any money? Far be it from me to

suggest that those insurance companies sold those policies fraudulently, knowing that they really only provided partial coverage. Heavens, no.

The process of going after the insurance companies was further complicated by the federal courts, which ruled that every case was an individual case and there could be no class action suits. To be fair, I followed the logic of this and certainly considered my own case to be unique, but it clearly meant that it would be a long time before all these cases would be settled. My lawyer, a professional pessimist, expressed the opinion that it would take at least two years and maybe as many as four. I finally settled with Nationwide – "We're on your side!" – about 2½ years after the storm.

It was an interesting process, ideally designed to make you a cynic, if you were not already one. Initially, of course, they didn't want to pay me anything. After I filed suit, they made me an offer that was equivalent to about 14% of the value of my claim. A few months later, after their lawyers had met with my lawyers a couple of times, what had been 14% became 40%. A few months after that, we all met in federal court, with a federally appointed lawyer as a sort of arbitrator, and what had been 40% became 70%. I wanted to keep going but my lawyer maintained that this was all we could get short of a jury trial and a jury trial would be expensive and time-consuming, and, ultimately, the outcome was unpredictable. So we stopped there. I still seethe with rage and will do for years, I'm sure.

I have, of course, returned to Biloxi many times over the past four years. It is astonishing to see how little has changed since the storm. The casinos were back in business very quickly, and that's understandable, especially in view of the employment that they generate. But for a long time, that was it. There is now a good deal of commercial construction going on, and several new condo developments, but almost no residential reconstruction. Drive along the beach from Pascagoula to Waveland and count all the empty lots. One of them is mine, still costing me money for taxes, insurance and yard maintenance.

Just about as depressing as driving along the Mississippi coast is driving into New Orleans from the east. But this makes me mad for a different reason. Certainly, the primary cause of the damage in New Orleans was Katrina, but it was the Mississippi coast that took the brunt of the storm: the damage in New Orleans was largely caused by the collapse of the levees. Yet, when the topic of Katrina comes up in other parts of the country or overseas, everybody thinks New Orleans. When people learn that I lost my house to Katrina, they usually react by saying something like "Oh, so you lived in New Orleans?" I suppose it's understandable that New Orleans got more attention than Mississippi, but it's still very annoying.

Delray Beach

The ConocoPhillips project had ended in March 2006 and the bad news had arrived from Nationwide the following month. There seemed to be little reason to stay in Houston any longer. Houston's a great city in many ways but you wouldn't want to actually have to live there. I had found many new friends there, plus a small home away from home in an eccentric French restaurant called the Bistro Le Cep, but it was never where I wanted to spend my retirement. So where was I going to go? For a long time, I had visualized a very civilized retirement in Manhattan, with all its attractions, but that route is nowadays really only available to the stinking rich. There had to be a good compromise somewhere.

Being the boring person that I am, I went about this systematically, making two lists. One was of criteria for an acceptable place to live, while the other was of places that I had already identified as candidates. Here they are, in no particular order:

Criteria of Evaluation	Candidate Regions
Livable downtown	Jacksonville, Florida
Good air service	Delray Beach, Florida
Not cold or wet	Portland, Oregon
Minimum need to drive	Annapolis, Maryland
Cultural center	Sydney, Australia
Good hospitals	Roussillon coast of France

I dropped the idea of leaving the U.S. pretty quickly: it involved far too many uncertainties and complications. I started looking on realtor.com to see what was available in my four preferred regions in the U.S. and immediately tripped over something that sounded too good to be true. There was a 1600-sq. ft. condo available in Delray Beach that faced the ocean and appeared to me, from my memory of that town, to be directly over a pub. I called the agent and arranged to meet her the following week. When I got there, I knew immediately that the search was over and I had to restrain my enthusiasm in the interests of a sane negotiation. My search had not taken too long.

The reason I had pre-cleared Delray Beach was that I had been there several times. One of my friends from New York had moved there several years previously, about the time that I had moved to Mississippi, and I had visited. These visits had convinced me that I could live quite happily in Delray Beach, and now I was going to.

Here are a few of the reasons that I like it here. In the whole coastal stretch from Miami's South Beach to the northern tip of Palm Beach, Delray Beach stands out. It doesn't have any screamingly ugly tall condo complexes: in fact, it only has a few

buildings that are over six stories and none of them block public access to the beach. It only has a few of those tasteless "McMansions" and they are neatly tidied away in one corner of town, where we can ignore them. It has a lively, interesting "Main Street", called Atlantic Avenue, only twelve blocks long and packed with excellent pubs, restaurants and cafés, almost all with sidewalk tables. It has over a mile of openly accessible public beach. The whole place has a human scale. In a nutshell, it's great, paradise on earth in a small way.

The Caffé Luna Rosa

When we were kids, we used to joke about marrying a nymphomaniac who owned a liquor store. In reality, I could not have handled such an arrangement then and even less so today. But when I moved to Delray Beach, I had not just found a good apartment in which to live. It turned out that my landlord was the owner of the pub downstairs and that I had a permanent 10% discount. Well, at least I didn't have to marry him.

The Caffé Luna Rosa, with apartments upstairs

The pub downstairs appears, externally, to be an Italian restaurant. Its name, the Caffé Luna Rosa, may have something to do with this. But it is really only an Italian restaurant – and it's a very good Italian restaurant – in the evenings. From 7 a.m. until 5 p.m. it's an American beachfront café-restaurant. In addition, its bar is not the typical cramped area where dinner customers wait for their tables: it's a great big drinking area populated by a bunch of eccentric local characters who rarely actually eat anything. People waiting for tables have to stand on the sidewalk. In a way, the Luna Rosa is a South Florida version of "Cheers". In short, it is my kind of place.

I knew I would be at home in this bar on the evening that I moved into the apartment. I had spent two evenings there when I had flown over from Houston to look at the place. Six weeks later, I drove over, arriving at about 8 p.m. I parked my car in its designated space at the back of the building and walked round to the front entrance. As I crossed the threshold, the bartender looked up from mixing a drink

and asked "Where the hell have you been?", as if I'd been a regular there for years. As I said, it's my kind of place.

I rent this apartment. Thanks to the witch Katrina, I now have very few possessions – a car, a computer, a television, a few books, and a few rather ratty items of second-hand furniture – and I have no desire to own anything ever again. What do I need possessions for? Since I have no dependents, this is an arrangement that works well.

Still Consulting, But

Although I had picked Delray Beach as a place in which to retire, I did not plan to actually retire, not just yet, anyway. I soon returned to my pre-ConocoPhillips mode of taking on multiple small consulting projects. Now that I was at least technically retired, however, and living on the beach, I could certainly start to slow down. I made four rules for my last few years of consulting:

- I would only take on projects that interested me;
- I would only take on projects for clients that I knew and could depend on not to be a pain, especially when it came to paying the bill;
- I would not take on anything that involved travel – defining travel as anything involving planes; and
- I would stop when I hit 70, well maybe.

The view from the office

Despite these self-imposed restrictions, I have tackled a number of interesting projects in the past three years. As before, they included business plans, market analyses, proposal management, valuations, expert testimony and things like that.

If you downloaded this memoir in its electronic version, you know that I maintain two web sites. The original site, ColtonCompany.com, which we created back in DC in 1995, is now mostly a column of my observations and opinions on daily activities in the U.S. maritime industry. The newer site, ShipbuildingHistory.com, is a collection of historical information, a monster that would keep me occupied round the clock if I were to let it. Both are, I think, useful additions to the universe of marine knowledge: the second one, in particular, needs to be taken over by someone after I'm gone.

In January 2009, I published the first edition of an annual overview of the U.S. marine market and subscribers also get a monthly newsletter that is, I think, unlike any other

marine industry newsletter. I was very pleased with the way this turned out until I realized that I had been writing it at the same time as the economy was collapsing around me, as a result of which it might not have been quite as downbeat as it should have been. The second edition is going to have to be a lot more than just an update.

These activities should keep me occupied, at an appropriately low level, for a while yet. Or maybe they won't. We shall see.

Looking Back

So there it is, fifty years of shipbuilding, neatly packaged in sixteen chapters. I didn't get rich in shipbuilding, but nor am I broke. I had a lot of fun but I suppose that I could have been more successful? But does it matter? What does it all add up to? What do I conclude from all this? There are a lot more answers to these questions than can be easily summarized here. Another book may be required, possibly called "How to Build Ships, Have Fun and Maybe Even Make a Little Money".

Anyway, it seems appropriate to wrap up this opus with a brief look back, at the positives, the negatives and some of the people who made them happen.

Consider first the negatives of the past forty years: there have been some right royal disasters. It has always been a recurring theme for me that every time you turn around in the U.S. marine industry, you come upon someone doing something stupid. The list is endless but the big-dollar items include:

- The ludicrous overbuilding in the seventies that was brought on by the too-easy availability of cheap financing.
- The *Exxon Valdez* fiasco.
- The steady decline of MARAD's role in the industry.
- The break-up of the Shipbuilders Council and the general uselessness of our multiplicity of fractious industry associations.
- The attempt to use Title XI to sell ships for export, including, in particular, Newport News' insane Double Eagle program, the single biggest black eye for the U.S. industry in fifty years.
- The Navy's elimination of competition from naval shipbuilding and the mess that is naval shipbuilding today.
- The endless meddling of our brainless politicians.
- The almost complete disappearance of our marine manufacturing industry.
- The destruction of our foreign-trade liner industry that was brought about by the elimination of operating subsidies: gone are AEIL, AML, APL, Delta,

Lykes, Farrell, Grace, Mormac, PFEL, Prudential, States, U. S. Lines, and more, leaving US-flag carriers who are US-flag carriers in name only.

- The loss of so many good shipyards, with tens of thousands of jobs, whether brought about by the elimination of construction subsidies, by the Navy's abandonment of competition or just by incompetent management: gone are American Ship Building, Defoe, Levingston, Lockheed, New York Ship, Peterson, Quincy, Sun, Sparrows Point and Todd San Pedro.

While the list of negatives is depressing, the list of positives is significant, especially as so many have had a worldwide impact. They include:

- The development of the containership, one of the most significant inventions of modern times: can you imagine what things would cost if we still moved stuff around in break-bulk cargo ships?
- The modern bulk carrier.
- The LNG carrier.
- The entire offshore oil and gas industry – platforms, rigs, OSVs, crewboats, etc. – an almost wholly American creation.
- The ATB, although this is an achievement that not everyone views as positive.
- The National Shipbuilding Research Program, although it has not had the impact that it should have had, partly because it has never been properly funded and partly because most senior shipyard managers never did more than pay lip service to its potential. But it was the right approach and it's great to see the "second-tier" shipbuilders benefiting from it.
- The emergence of our second-tier yards as modern, efficient shipbuilders with the ability to compete internationally.

And so on. We may not have the world's most efficient maritime industry but we are certainly not short of ideas.

It should be no surprise that this atmosphere of innovation has thrown up some wonderful characters. Any list is bound to be incomplete and your list will inevitably be different from mine. The great characters I have known, for better and for worse, but excluding people who are still active in the industry, include, in alphabetical order, Harry Benford, Helen Bentley, Leo Berger, Al Bossier, Jesse Calhoon, Ed Campbell, Mel Colen, Gene Coughlin, Bob Derecktor, Buzz Fitzgerald, Larry French, Jerry Goldman, Page Groton, Dan Mack-Forlist, Malcolm McLean, John McMullen, John Nachtsheim, David O'Neil, Ed Paden, Ellsworth Peterson, Lester Rosenblatt, John Serrie, Ole Skaarup, George Steinbrenner, John Stocker, Taki Veliotis and C. C. Wei. Imagine getting that crowd together to review the state of the industry today!

So, where do we go from here? The U.S. maritime industry is something of an anomaly. It is so inefficient in so many ways, but it is not about to go away, partly because of defense procurement policy and partly because of the Jones Act, blatantly protectionist measures that the rest of the world has almost universally done away with. But the rest of the world has apparently forgotten that Adam Smith supported the Navigation Acts and specifically exempted shipbuilding and export shipping from his general principle that free trade was the way to go.

There is no reason to give up our protectionist measures, although it may be too late to recreate our foreign-trade shipping industry. But there are things that could be changed, that would make us more cost-effective. These include embracing multi-year procurement of naval ships, restructuring the Navy's procurement practices, funding the NSRP properly, applying the OPA 90 phase-out principles to dry cargo shipping, providing constructive, low-bureaucracy financing for shipbuilding, reviving the repair business, encouraging foreign marine manufacturers to set up in the U.S., educating high-school students about careers in the marine industry, and getting the smaller shipyards to move up out of their 1950s-era technology.

The important thing is that we can get better if we really put our minds to it and given strong leadership, both in industry and in government.

Envoi

Back in 1958, when I started in shipbuilding, I did not think that it was going to be boring and it certainly wasn't. How could it have been? In the course of the past fifty years, I've been involved with every type and size of vessel; naval, commercial, offshore, you name it; construction, conversion and repair; yards with many thousands of employees down to yards with fewer than twenty; mostly yards in the U.S. but yards almost everywhere else, as well. I do not believe that I have missed out on participating in any particular sector. I've met some extraordinary people and made many friends, some of whom I know are reading these memoirs.

It's been amazing. Thank you, all of you.