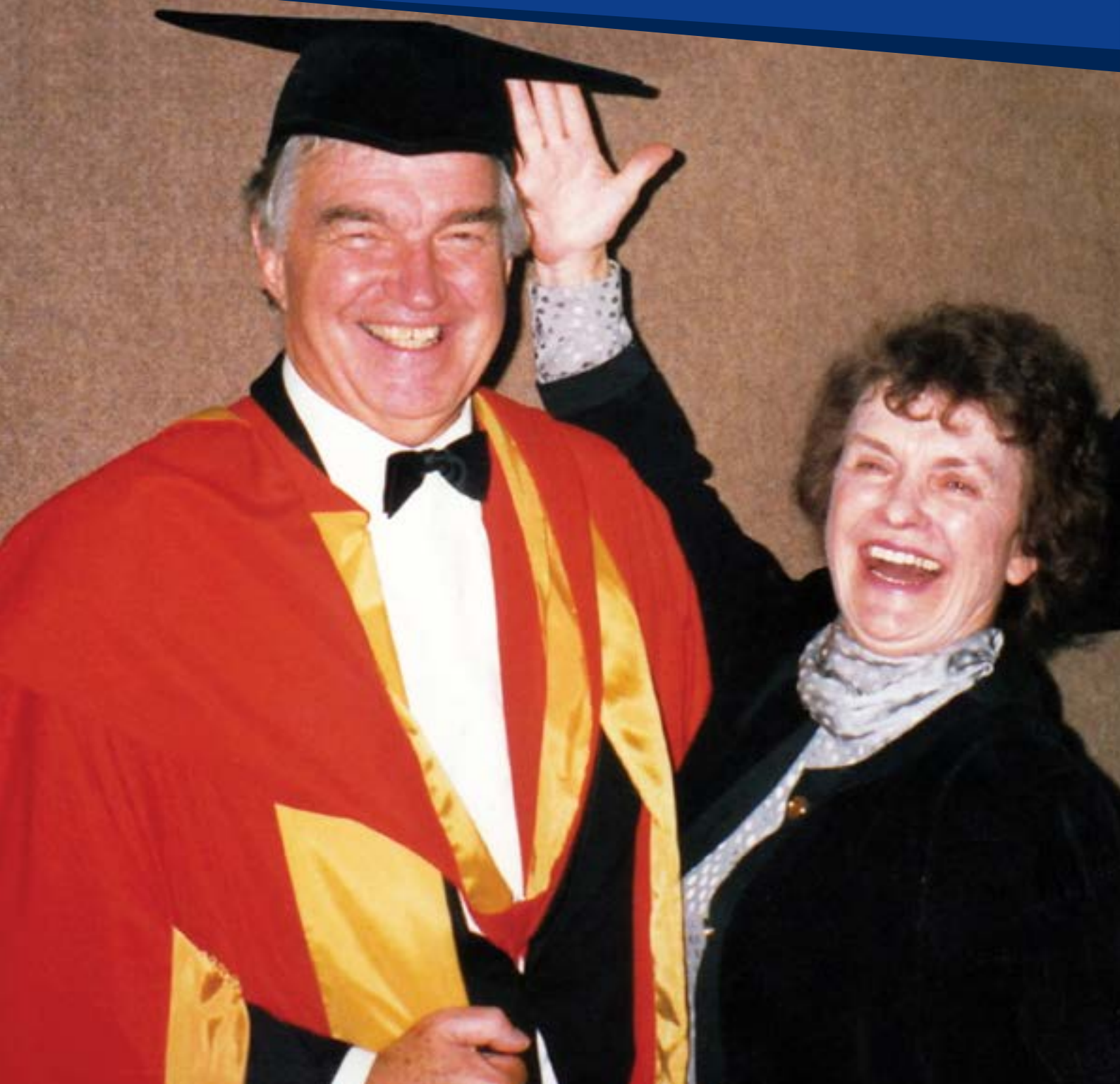


Memories of William Harold Clough



By Mimi Packer ▶



Memoirs of
William Harold Clough

By Mimi Packer



Introduction

This memoir is primarily for family and friends.

I started writing Dad's memoirs after he had a cataract operation. His eye specialist had instructed that he wasn't allowed to read, and so he had no option but to talk! It was 5 July 2011 and we were at his office at 117 Broadway, Nedlands.

He had his second cataract operation on 26 August 2011 and again was not allowed to read for two full days, hence the opportunity for more storytelling. While in the surgery before his operation with Dr. Fred Nagle, who is also a character, Dad said to the nurse taking his blood pressure, "It will be 125/75. My blood pressure is always the same. If it's not that, then your machine must be wrong." He was right. His blood pressure was exactly 125/75.



1967 Harold and Mimi 'Monkey Face'

Interviews have continued and I have also added notes from articles, speeches and transcripts from postcards sent by Dad's father, John Oswald, during World War I.

I have endeavoured to capture Dad's memories, as much as possible, in his own words.

It has been a wonderful experience spending time with Dad and learning about his life and the experiences he's had and the people he has shared them with. I particularly relished his often maverick and free-thinking views and opinions which are included in this book.



Harold and Mimi 2017

There was one quote Dad shared with me, that captured my heart. It comes from Rudyard Kipling, and epitomises the importance of family to Dad. The family should operate like a wolf pack.

"The strength of the pack is the wolf and the strength of the wolf is the pack."
The Law for the Wolves,
The Second Jungle Book

Dad turns 92 on 30 September. As of August 2018, he has six children, 16 grandchildren and five great-grandchildren. He continues to work seven days a week.

Mimi Packer



Celebrating Harold's 90th birthday on 30 September 2016

Back row: Matt Liddelow, Macgregor Vidler, Bill Clough, Sue Townsend, Jock Clough, Jake Liddelow, Libby Clough, Peter Shack, Bella Liddelow, Essie Clough, Lucie Vidler, Blue Lougher

Middle row: Jamie Clough, Sophie Heath, Annabella Packer, Mimi Packer, Harold Clough, Violet Liddelow, Margaret Clough, Becky Clough, Tory Bussi

Front row: Clementine Packer, Jock Packer, Barney, Callum Vidler, and Bonnie Liddelow

CONTENTS

1. Early family history	01
<ul style="list-style-type: none"> • Cloughs and Waltons • Move to Dark River around 1895 • Mascotte gold mine • Clough family home and Dark River School • Move to Western Australia - gold fever again 	
2. My father, John Oswald Clough	09
<ul style="list-style-type: none"> • World War I • Jack Clough and Lucy Hayes • The ANZAC landing and Vignettes of Gallipoli • To the Western Front and mention in dispatches • On the Somme and the Distinguished Conduct Medal • Clough Brothers • Marrying Lucy Hayes 	
3. My childhood	31
<ul style="list-style-type: none"> • Hayes Family • Lucy • Uncle Bill • Aunt Tess • Judy • Nedlands Primary School and Claremont Central • World War II • Urine test and Roger Fitzhardinge • John Fitzhardinge • Holidays at the Naval Base • Narrogin • Doug Klem and learning about machines • Boy Scouts • Scotch College • Rowing at Scotch College • Leaving Scotch • Uncle William (Bill) Edwin Clough • Isobel and Gerry McShane 	

4. Life after school

52

- Working at the AMP 1943
- Jimmy Jamsticks
- Engineering at the University of Western Australia
- University Rugby Club
- Engineering initiation rites
- Working in the university holidays, being the chainman
- Jenny Finkelstein, Betty Balstrup and Bruce Rogers
- Prosh
- Graduation in Mechanical Engineering
- Wally Russell and Cooperative Bulk Handling
- Nash car
- On the road with Peter Wright - Coolgardie, Kalgoorlie, Adelaide, Melbourne
- Bob Walker and WD Scott Consulting and Method Time Measurement
- Selling the Nash

5. Moving to America

62

- Fulbright Scholarship to Berkeley University and flying to America
- Uncle Arthur
- Berkeley University, California - 'Bill' versus 'Hal'
- International House
- Meeting Norman McRae
- Meeting Marg
- Hans Alpanalp – tennis and skiing
- Exams
- Holt Scholarship
- Bechtel Corporation 1953
- Phoning Marg
- To New York to visit Marg

6. Back in Australia

72

- Working with Clough Brothers
- Fighting like cats and dogs!
- National Mutual Building
- Albert Scott and the team
- The Narrows Bridge
- Joint venture with Christiani & Nielson
- T K Sorenson
- Death of my father
- Opening of the Narrows Bridge
- Narrows Bridge is falling down
- The ferry and the Narrows Bridge

7. Family

90

- Jenny Sue, John McRae, Rebecca Margaret, Elizabeth Anne, William McRae and Margaret
- Building the first above ground swimming pool
- Guy Fawkes night
- Jogging at the beach
- Jock and the toothbrush

8. Engineering jobs and business associates

100

- Christiani & Nielson and CBH Grain Silos, Ord River Diversion Dam and Durack River Bridge from 1959
- Muja Power Station, Collie 1962
- Standard Gauge Railway with Perron Brothers/Theiss Brothers 1964
- Stan Perron
- Garrick Agnew
- Shark Bay Salt 1964/5
- Adelaide Steamship Company
- Shark Bay port facilities 1965
- Geoff Smith
- Lining the salt ponds
- Funding by Mitsui and speaking Japanese
- Family Trips to Shark Bay
- Joint Venture with Harbourworks and Dampier Jetty 1966
- Projects in the Pilbara - from mid-1960s through the 1970s
- Indonesia 1968
- Dodging bullets with Geoff Smith in Indonesia 1968
- Peter Knight and Petrosea
- Overturned dredge
- Agnew Clough 1969-1977
- Catching record-sized marlin with Garrick
- Problems with Wundowie
- Robe River Iron Ore Associates
- Lang Hancock 1970s
- Oil, gas, beer and bridges 1970s
- Mount Street and Len Buckeridge 1971
- Working in Nigeria and with Michael Kailis 1975
- Saudi Arabia 1976-1984

9. The challenging years – 1980s	125	13. Honours	167
<ul style="list-style-type: none"> • The oil price drops • Stony Points Liquids Jetty and Sue Wager 1982 • North Rankin 'A' Trunkline and ETPM • Harriet Oilfield and Challis • Buying Petrosea 1984 • LNG jetty at Burrup Peninsula for Woodside • Clive Palmer 1980s • PICL, late 1980s 		14. Views and opinions	175
10. Growth in the 1990s – trouble in the 2000s	135	<ul style="list-style-type: none"> • On industrial relations • On free markets • On non-government organisations • On climate change • On lawyers • On genetically modified foods • On work • On the press • On Sir Charles Court • On cars • On lunch at the office • On travelling light • On retirement 	
<ul style="list-style-type: none"> • Petrosea oversubscription of shares 1990 • Pagerungan Island Development, early 1990s • The collapse of a currency – Indonesia in 1997 • Pakistan • Bunnings • Giving Clough staff shares and subsequent listing 1990s • Clough Limited and Clough Engineering restructure 2000s • More losses • Selling my name 		15. Professional Associations	186
11. Life after Clough Engineering at McRae Investments	149	<ul style="list-style-type: none"> • The Australian Institute of Public Policy, 1983 • Chamber of Commerce and Industry WA • Australian Indonesian Institute 	
<ul style="list-style-type: none"> • Shingles of the eye 2003 • Touching my toes and sequestrated disc • More stents • Move to Broadway, Nedlands in early 2003 • McRae Investments Pty Ltd • Brian Davies and Davies Wear Plate Systems • Green Recycling and Koast Tyres • Perthwaste/Green Recycling • Selling Koast Tyres and distribution to grandchildren • Bill's projects – Serabi, Colomi, Twinza and Phnom Penh Post • Len Buckeridge and Geoff Mews • Long Ikis, Kolondale and Bengkulu • Bullsbrook development in 2013 		16. Family matters	190
12. Clough Scholarship and UWA	158	<ul style="list-style-type: none"> • The farm at Bullsbrook • Cliffdale Station and Hell's Gate Roadhouse • Tennis on Saturday afternoons • Overseas holidays • The Coombe 	
<ul style="list-style-type: none"> • The Clough Scholarship • UWA Senate • Donation to UWA • Last lecture at University • Ken Michael • Sue Murphy 		Appendices	233
		<ul style="list-style-type: none"> • Board Memberships • J O Clough war records • Letters of John Oswald Cough from the Front 	

01

EARLY FAMILY HISTORY



The Cloughs and Waltons

My father, John Oswald Clough, was born in Richmond, Victoria, on 2 February 1887, the son of William Clough and Phoebe Walton. The Cloughs came from Leeds and the Waltons came from Durham.

My great-grandfather, William Walton, was born in 1827 and was a lead miner like his father and grandfather before him. He worked in one of the mines near his home village of Westgate. In 1853 William married a lead miner's daughter, Mary Watson, and almost a year later Mary gave birth to a daughter, Phoebe, on 3 January 1854, in Durham. Tragically Mary died of gangrene just months later, probably as a result of the childbirth.

In November 1855, William made the decision to immigrate to Australia to seek his fortune. He had heard about the gold rush there and went on an unassisted passage aboard the *Sussex* to the Victorian goldfields, but he left our ancestor, young Phoebe, behind.

Although mining was all he knew, William was smarter than the average miner and realised he could make more money, and remain safer, by transporting the gold diggers instead of competing with them.

He married Isabella Bainbridge in 1859 and they had seven children. In 1863, nine-year-old Phoebe Walton, the daughter William had left in Weardale, made the journey to Australia on unassisted passage aboard the *White Star*.

John Oswald Clough 1891 (4 years) with Aunt Ada Walton, Chiltern, Victoria



William became a cab owner in Bendigo, which was in the centre of the Victorian gold mining district. He was a man of distinction, because he read history and philosophy between rides!

On 8 June 1883, William's eldest daughter, Phoebe Walton married my grandfather William Clough (born 1840, Yorkshire) in Sydney. They had four children, but one died in infancy. My father, John (Jack) Oswald (born 1887, Richmond) had an older brother, William (Bill) Edwin (born 1885, Ballarat), and a younger sister, Mary Isobel (born 1889, Chiltern).

Move to Dark River around 1895

When my father was born the family lived at 67 Church Street, Richmond, just out of Melbourne. Then in 1895, when my father was seven, my grandfather, William Clough, was appointed Managing Director of the Mascotte Pyrites Mine NL, a gold mining company, and they moved to Dark River.

Dark River flows into the Dartmouth Dam. It is very much in the mountains of Northeast Victoria and about 40 kilometres west of Mount Kosciusko in New South Wales, which, at 2,228 metres above sea level, is the highest point in Australia. There is now a road from Corryong to Omeo that passes close to the Mascotte mine and treatment plant, about 30 kilometres south of Corryong.

Prior to 1900, what is now known as the Dart River was called Dark River. Gold was first found in the region in about 1874, and by 1877 about 25 men were prospecting there. In 1883, Charles Williams discovered the Mascotte mine at the headwaters

of Browns Creek. On 13 June 1883 he, together with Robert MacDowell, William Wye and George Stone, registered a prospecting claim for Mascotte Gold Mining Company NL. The best year for the district was 1888, when 2,000 ounces of gold were extracted.

Mascotte gold mine

On 31 March 1897, the Mascotte Pyrites Company No Liability was incorporated in Ballarat with a capital of £20,000 represented by 20,000 shares of one pound each, 10,000 of which were fully paid up and 10,000 contributing shares. The registered Manager of the company was James Scott Smith; the Chairman was Charles Seal and the Mine Manager William Clough.

The shareholders and directors were:

- William Clough, Mining Manager of Tallangatta, 100 shares
- J. Henderson, Mining Manager of Ballarat, 100 shares
- Charles Seal, Gentleman of Ballarat, 100 shares
- T. Edwards, Metallurgist of Ballarat, 100 shares
- T.A. Robertson, Solicitor of Ballarat, 100 shares
- D. Avery, Mining Speculator of Ballarat, 100 shares
- James Scott Smith, Legal Manager of Ballarat, 100 shares
- Shares held in trust for the Company, 19,300 shares

T. Edwards invented the Edwards tilting hearth furnace, which became a standard roasting tool in the growing gold industry, and one of the first was installed at Dark

River in about 1896 where my grandfather, William Clough, was Manager.

Clough family home and Dark River School

The Clough family's home was on the bank of the Little Dart River opposite the gold treatment plant. The Dark River School 3159, which opened on 4 April 1892 with 11 students, was about a kilometre down river, and the Dart River town site was a kilometre further, where the Little Dart River joined the Dart River.

The Head Teacher (the only teacher), William H. Loftus, listed the three Clough children as students on 8 June 1895.

- William Clough – fourth grade
- John Clough – third grade
- Isabella Clough – first grade.

At that time there were 15 students in the school. On 12 October 1895, Loftus wrote to the Education Department, Melbourne, asking for permission to teach the first class outside the school building because of overcrowding. The school at this time was 12 feet 6 inches by 12 feet, and made of timber slab walls lined with canvas and a shingle roof.

On 26 October 1895, Loftus was replaced as Head Teacher by Allan W. McDonald. On 28 March 1898, McDonald wrote to the Education Department, Melbourne, asking to increase the size of the school to 28 feet by 12 feet 6 inches, because the numbers had increased to 20 students.

The only way to Dark River at that time was by packhorse from Cravensville, about 30 kilometres northwest. Life must have been very primitive. There were 15 children at

the school; the furniture was constructed from sawn timber and packing cases. The teacher, seeking a mountain allowance, which was refused, wrote:

"I paid 17s per week for board and lodging and at times it was very poor. On some occasions I have lived for a week on bread and tea and there was neither meat nor butter available. Last year we did not have any kind of vegetables for months, not even potatoes. My host and hostess are not to blame as I honestly think they do their best."

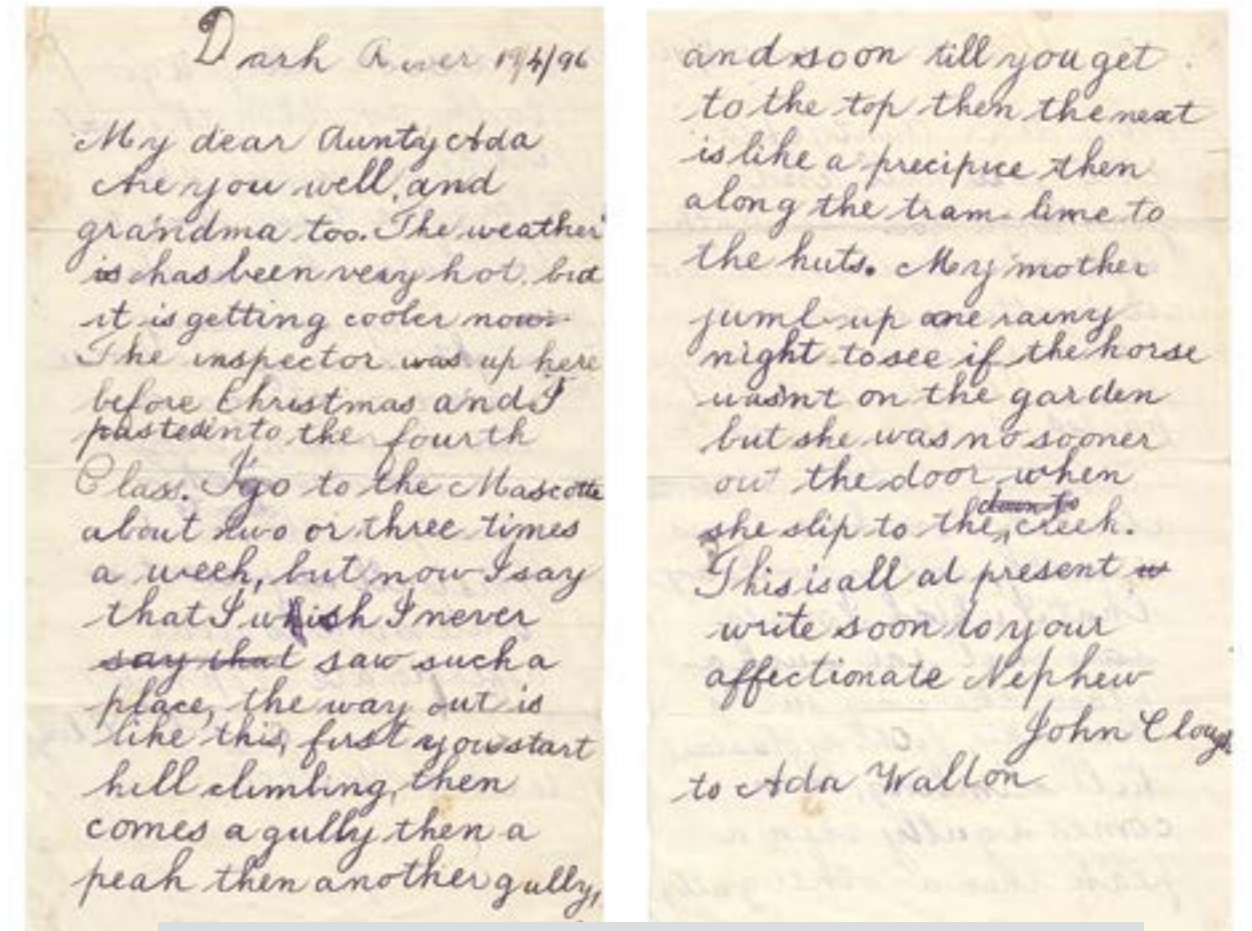
My father (aged nine) wrote to his Aunt Ada in Chiltern, Northeast Victoria, about life at Dark River:

**"Dark River 19/4/96
My dear Aunty Ada**

Are you well, and Grandma too. The weather has been very hot, but it is getting cooler now. The inspector was up here before Christmas and I past into the fourth Class. I go to the Mascotte about two or three times a week, but now I say that I wish I never saw such a place, the way out is like this, first you start hill climbing, then comes a gully then a peak then another gully and so on till you get to the top then the next is like a precipice then along the tram line to the huts. My mother jump up one rainy night to see if the horse wasn't on the garden but she was no sooner out the door when she slip to the creek,

This is all at present, write soon to your affectionate Nephew

**John Clough
To Ada Walton"**



Letter John Oswald Clough sent to his Aunt Ada on 19 April 1896

As a young boy, my father used to ride a horse bareback to school through the mountains, and this association with horses, I think, stood him in good stead when he got into the Army.



John Oswald Clough astride a horse in Dark River about 1898



2000 Judy and Les Hollier, Poss Morrow, and Harold, Marg and Bill Clough after exploring the remains of the Dark River settlement and the Mascotte mine

Mascotte Pyrites Mine NL was listed on the Stock Exchange of Melbourne and raised A£35,000. They extracted 2,000 ounces in its first year, which was significant. At one time my grandfather was going to have the richest gold mine in Australia, and my father was going to go be educated at Eton and Oxford!

The company mined and produced gold ore at the Dark River Mine until about 1902, when they ran out of money and went broke, just five years after the Company had been formed. By 14 July 1902 the number of students had gone down to eight, and on 3 October 1902 the school was closed.

Move to Western Australia - gold fever again

In about 1900 the Kalgoorlie gold rush was on and my father's family moved to Perth. My grandfather deposited his family in Alfred Street, Mosman Park, under Monument Hill, while he went to try his luck on the Kalgoorlie gold fields. However he suddenly fell ill and returned to Mosman Park. He had only been back a month or so when he died on 18 June 1902 of cardiac disease. He was 62. When Jack ran to Claremont to find the doctor to say his father had died, the doctor said "Well, there's no need to hurry. He's dead." At that stage my father was 15 and William a bit older and Isobel a bit younger.



Marriage of William Edwin Clough to Mary Roddan, 13 August 1913; John Clough, back right, and not that happy about a Catholic wedding

The responsibility for supporting the family fell upon the two boys, my father and his elder brother Bill. My father left school and became an apprentice bricklayer. Bill became an apprentice carpenter. To find work in those days, the bricklayers used to go to the railway station to find out where the bricks from Midland Junction were being unloaded. The bricks would be unloaded at the railway station closest to the building site, to which they would be hauled by horse and cart, so the bricklayers used to catch a ride on the cart and when they got to the site they'd see if they could get a job.



John Oswald Clough 1913

Phoebe Clough, my father's mother, died of diabetes just four years later on 20 September 1906 in Cottesloe, aged just 50.

On completion of his apprenticeship as a bricklayer, my father went to Melbourne and worked there for several years before coming back to Perth and working in Narrogin with Bill, by then a well-known carpenter. My father's claim to fame in Narrogin was that he played ruck for the Railway Football Club and got mentioned in the papers several times as "best on field". He would have been a big strong tough football player.

He was working as a builder there on 28 July 1914 when the First World War started and he enlisted in the Army almost straight away. He was fit and strong, 27 years old and still single.

02

MY FATHER, JOHN OSWALD CLOUGH



World War I

My father enlisted on 17 August 1914 and was allocated to the Artillery and sent to Blackboy Hill Camp outside Midland Junction. He was posted to 8th Battery, 3rd Army Field Artillery Brigade, and trained on No 4 gun, sub-section D. This was where he met Bill Hayes. They had joined at the same time, but there were nearly seven years between them. Bill was only 20 years old. He worked with the Taxation Department and had joined the militia some years before the War started and, I think, was a corporal, a non-commissioned officer. Bill lived with half a dozen of his siblings in a house in West Leederville.

They lived in tents at Blackboy Hill. Bill Hayes told me that the new recruits were a rough, tough lot so there were lots of fights and he, being of somewhat smaller build, decided that Jack Clough, who was



8 October 1914, Gunner John Oswald Clough, Artillery Camp, Blackboy Hill, in front of bell tent

big and, as a bricklayer, strong, was a good fellow to have as a friend and be able to stand behind in times of trouble. They

became best friends and remained so for the rest of their lives.



15 September 1914, Artillery Camp, Blackboy Hill

12 September 1914, John Oswald Clough, back left, Blackboy Hill



23 September 1914, 8th Battery, Field Artillery, Blackboy Hill, John Oswald Clough is middle row, 3rd from right



1914, John Oswald Clough, 4th from left, Blackboy Hill

In the camp they were living under canvas in circular bell tents with a central single tent pole. My father told the story of how the whole group of them would sleep with their feet to the head pole and their heads towards the outside, with lots of room for their heads but not so much room for their feet. They would go to sleep at night with their feet on top of the pile in the middle, but wake up with half a dozen feet on top of theirs, so they would pull theirs out and put them on the top and the whole process would be repeated.

Jack Clough and Lucy Hayes

When they were granted leave, my father didn't have a family to go home to, but Bill had brothers and sisters, including Fred, Tess, May, Dick, Doll, and Lucy, living in West Leederville at 2 Russell Street. Bill was from a family of 13 children and more than half had come to Western Australia

from Victoria in about 1910. When they got leave, Bill would go home, and he invited his friend Jack Clough to come with him for a few days. That's where my father undoubtedly met my mother, Lucy. Apparently, it was a jumping place to go: swinging in 1914. Bill was the youngest child and my mother was the second youngest. They were great mates too, I guess because they were close together.

The ANZAC landing and Vignettes of Gallipoli

After several months at Blackboy Hill, both my father and Bill embarked on the *Medic* at Fremantle on 2 November 1914, convinced that they were heading for England. Instead they disembarked at Alexandria in Egypt on 12 December 1914 and were stationed just outside Cairo in Mena Camp in the shadow of the Sphinx.



Dorothy, Ester, Lucy, Ethel and May Hayes

There followed a further three months training in the desert sands before they were back at Alexandria on 9 April to board the *Karoo* and head for the island of Lemnos en route to Turkey.

My father was in the landing at Anzac Cove on 25 April 1915, and remained with the battery at the Dardanelles for the next eight months until the Allies were withdrawn on 19 December 1915.

He was a Corporal and Bill was the NCO commanding. The best information about this period is the diary that Bill kept when they were in Egypt and when they landed in ANZAC Cove. It goes right up to when he was injured. He was 21 at the time, or something like that. It is amazing reading the thoughts of a 21-year-old in a very difficult war situation. You know, it was half excitement and half horror – excitement over what they were doing, and horror because people he knew were getting killed.

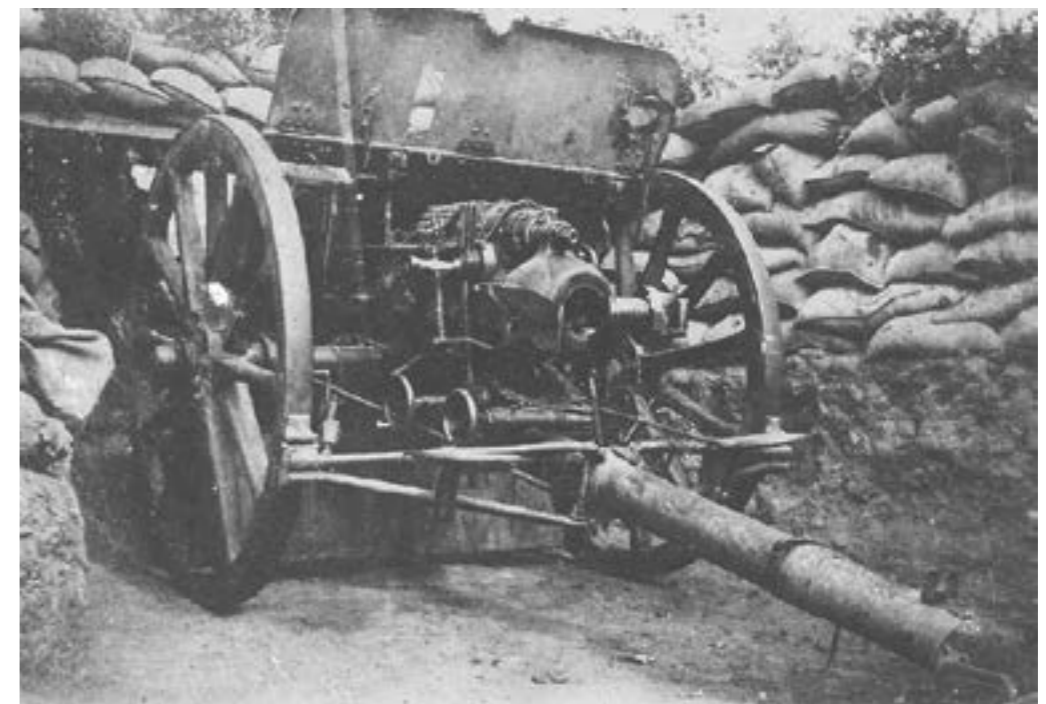
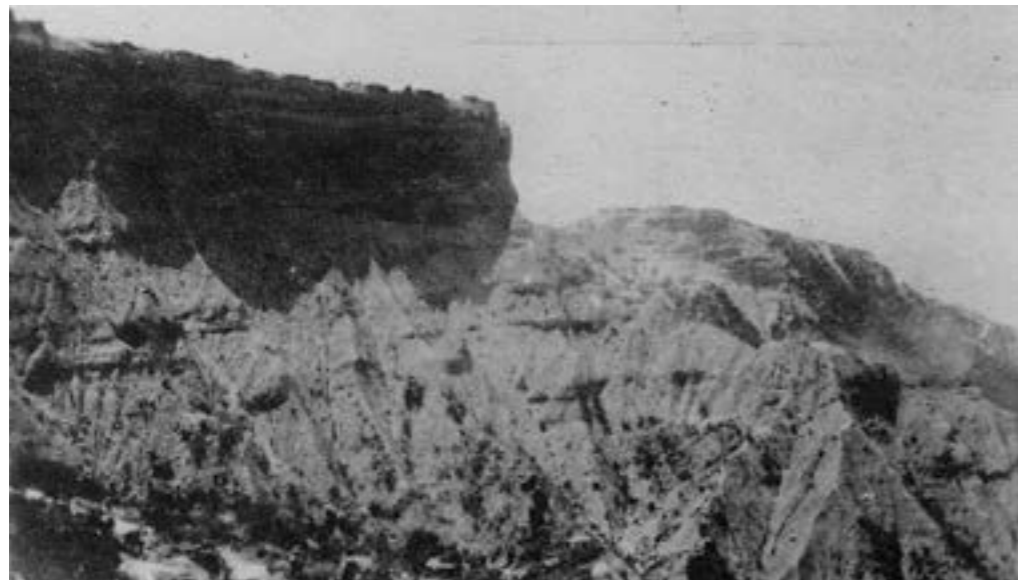


Bill Hayes and Bill Barling, Egypt

The Anzacs got a foothold at the base of the cliffs and then floundered because the Turks had all the high ground so the Anzac forces were always trying to dislodge them. My father was in the artillery and was on the gun crew while in action at Gallipoli. Normally the guns were some distance behind the front line and the gunners would fire shots over the line, but

on one occasion they decided to run their 18-pounder over planks laid across the front-line trenches to engage the enemy with direct line-of-sight fire. The problem was that this put the gun crew in the direct line of fire. Apparently the Turks responded vigorously and they were lucky to get out alive. They only did that once.

Gallipoli, cliffs, beach camp and gun



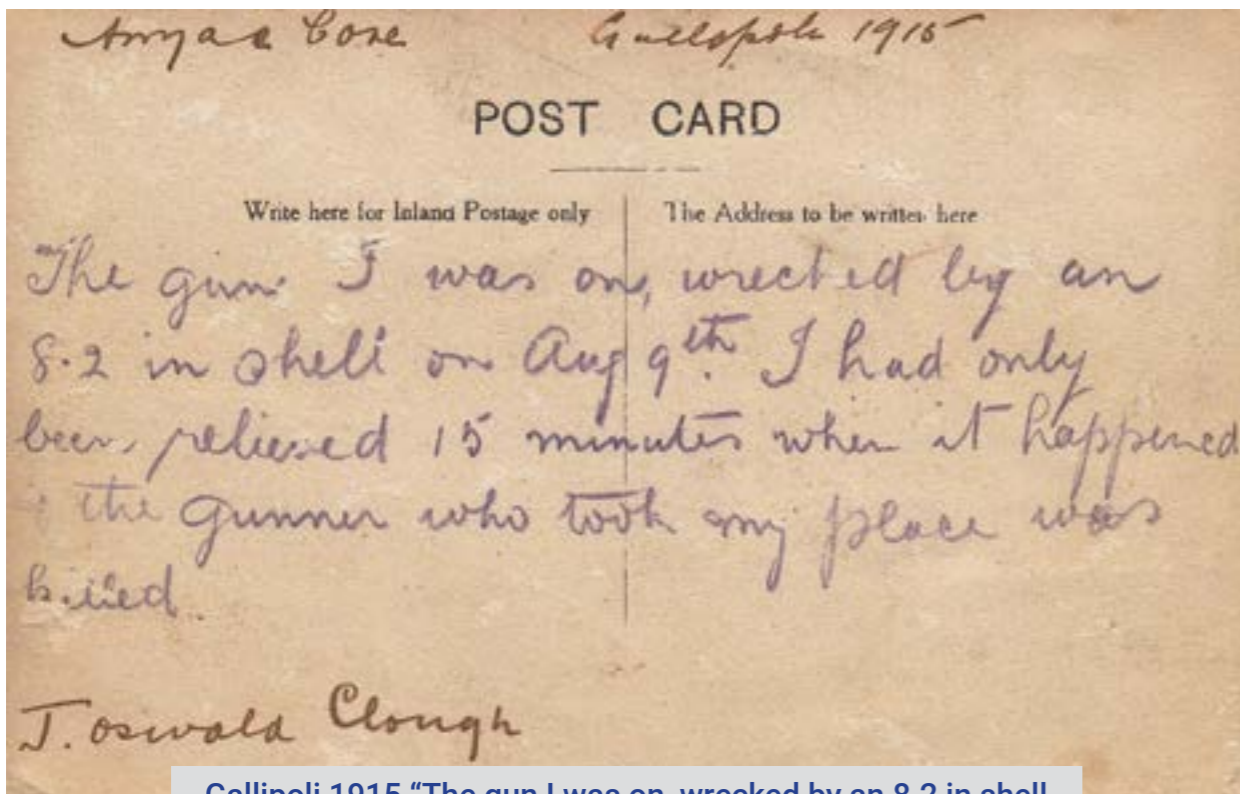


Gallipoli 1915
Sergeants & Corporals of 8th
Battery going out for instruction
I am second from the left

Gallipoli 1915, Sergeants and Corporals of 8th Battery going out for instruction, John Oswald Clough, 2nd from left

CARTE POSTALE
Anzac
2nd Dec. 1915

2 December 1915, Gallipoli in winter and snow-covered gun



Gallipoli 1915 "The gun I was on, wrecked by an 8.2 in shell on Aug 9th. I had only been relieved 15 minutes when it happened and the gunner who took my place was killed."

My father's biggest complaint about Gallipoli was that they could never get rid of the fleas. Their uniforms were always infested because they were living in dugouts and trenches and the fleas flourished in the sandy conditions. All troops had been issued with a sort of vest to be worn next to the skin to ward off tuberculosis, which was a scourge at the time. The only place to wash was in the sea, and when they got time off they would go down to Anzac Cove for a swim and a wash. He thought he'd found a solution to the fleas by stripping off his clothes and submerging them in the ocean under stones for a couple of days to drown them. No sooner had he put the uniform on again than the fleas were back. So they lived with fleas all the time at Gallipoli.

Another problem he talked about was the fact that the trenches they lived in were vulnerable to overhead gunfire, and there was always a shortage of timber that could cover them. One night there was a tremendous storm, and next morning when they awoke the beach was strewn with timber and other debris. The officers immediately mounted a guard over the timber so they could control which trenches would be covered. My father and his team discussed how they could distract the guard and sneak down and grab enough for their trench. My father, who was a bombardier and had two stripes, had a different way of doing things. He collected half a dozen of his team, lined them up and marched them down the beach. There he called "Halt. Pick up the wood," and marched them back to their trench.

My father worked as the gunner in the gun crew, and there were four or five men working a gun at any one time. On

one occasion he had just been relieved when, only a few minutes later, an 8.2-inch Turkish shell scored a direct hit on their gun and killed the gunner that had taken his place and injured the others, including his best mate Bill Hayes.

Bill was taken to a hospital ship that was moored some miles off the beach and out of the range of Turkish shells. They would fill the ship with injured soldiers and then sail back to England. Despite his best attempts, my father couldn't find out how badly injured his mate was, or if he'd survived at all. So at the first opportunity he stripped off and swam several miles out to the hospital ship and climbed aboard. He got into trouble for appearing before the female nurses stark naked, but satisfied himself that Bill was going to live.

Bill did survive, but was badly injured. He was taken to England first and deemed too badly injured to resume his duties, so was repatriated to Australia. He returned to Fremantle by ship and was discharged, but no one had been advised and there was no one to meet him. He was given his railway fare to Perth and caught the train to Leederville and went home to 2 Russell Street. There was no one at home, the house was locked and he could not get inside so he slept for a while on the verandah and then found a neighbour with a telephone so he could call his sisters.

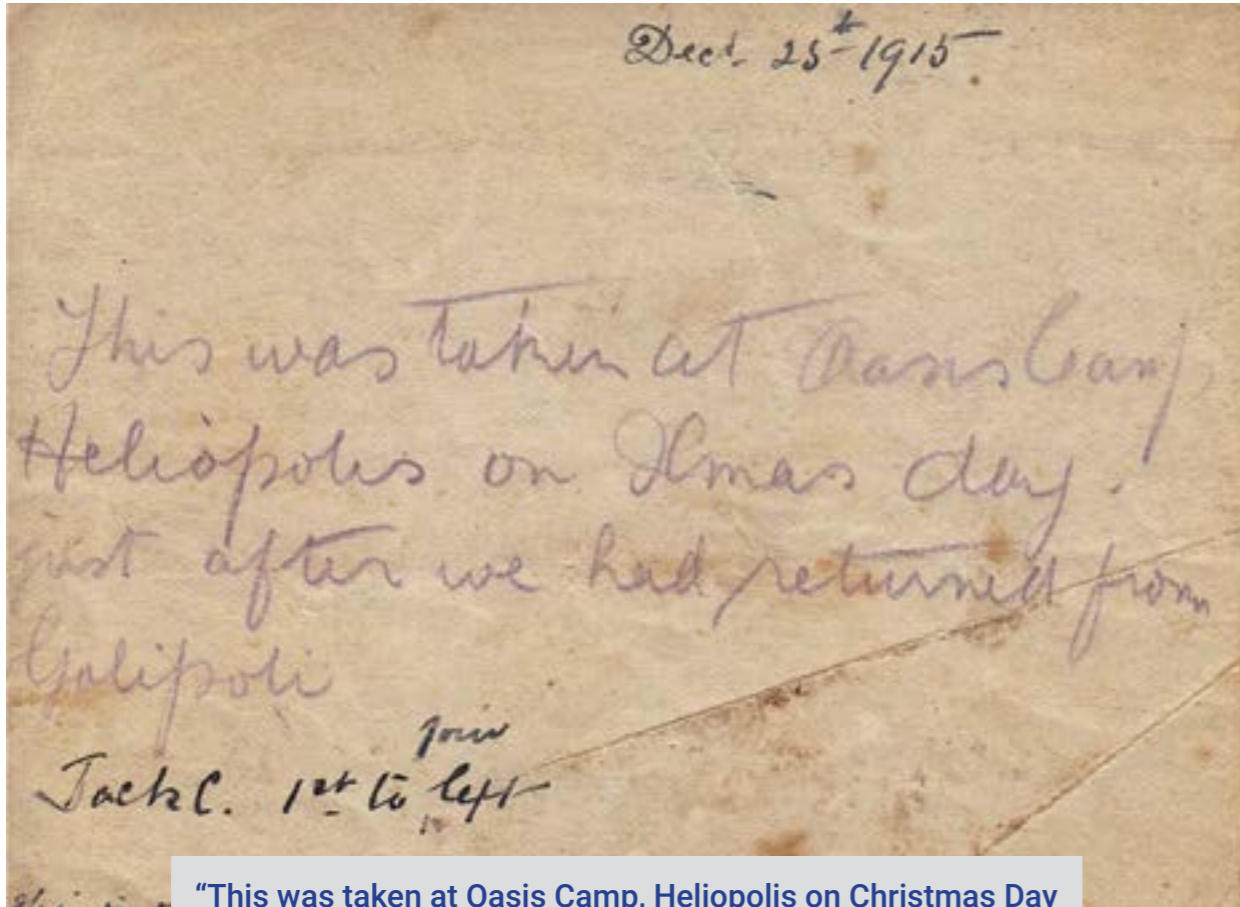
The 8.2-inch Turkish gun caused a lot of problems. They called the gun "Beachy Bill" because it would regularly shell Anzac Cove and other areas, causing casualties and havoc. Bill told me how he and my father were part of a group called together to form a raiding party to see if they could get to the gun and destroy it. After some



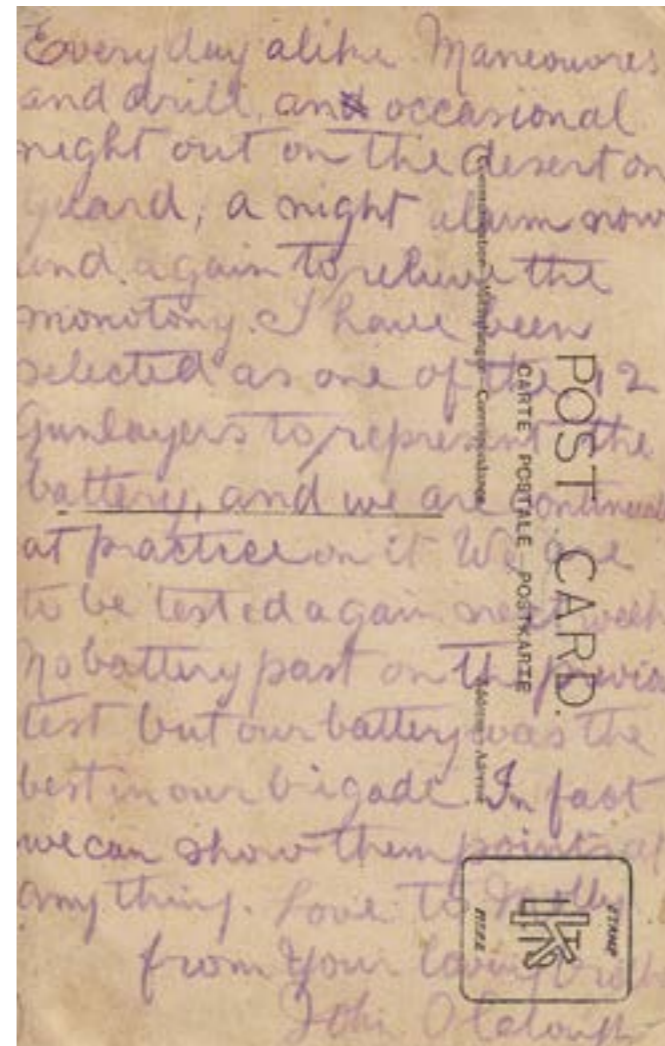
25 December 1914, John Oswald Clough on left, Egypt



Lunch on Christmas Day



"This was taken at Oasis Camp, Heliopolis on Christmas Day just after we had returned from Gallipoli"



"Every day alike. Manoeuvres, and drill, and occasional nights out on the desert on guard. A night alarm now and again to relieve the monotony. I have been selected as one of the 12 gunlayers to represent the battery, and we are continually at practice on it. We are to be tested again next week. No battery passed the previous test but our battery was the best in our brigade. In fact we show them points at anything. Love to Molly, from your loving brother, John O Clough"

consultation it was decided that it was too dangerous and, fortunately for them, that exercise was called off.

There are some great stories about how the Allies withdrew from Gallipoli without the Turks knowing. For instance, they positioned loaded rifles facing the Turks with their triggers attached to a container, above which was a second container that dripped water into the first, so that after a period of time the rifle would fire. As a consequence, the Allied troops withdrew almost without incident.

By the time the battery was evacuated from the Dardanelles on 19 December 1915, my father had been promoted to Sergeant, and was very fortunate to be alive.

To the Western Front and mention in dispatches

After leaving Gallipoli, my father was sent back to Egypt and his battery found itself at Heliopolis and at Tel-el-Kebir. In a postcard home, he said *“Every day alike. Manoeuvres, and drill, and occasional nights out on the desert on guard. A night alarm now and again to relieve the monotony. I have been selected as one of the 12 gunlayers to represent the battery, and we are continually at practice on it. We are to be tested again next week. No battery passed the previous test but our battery was the best in our brigade. In fact we show them points at anything.”*

My father was promoted to Quartermaster Sergeant on 12 March 1916 and soon after, on 23 March, entrained for Alexandria. He boarded the *Nessian*, which steamed westwards along the Mediterranean. Disembarking at Marseilles, they reached

Le Havre by 13 April and were soon in action with the 1st Australian Division on the Western Front. They were almost constantly on the move, reaching Pozières in August, Ypres in September and Flers in late October.

During this time he was promoted to Sergeant Major on 28 August 1916 and mentioned in dispatches by General Sir Douglas Haig, Commander-in-Chief of the British Army in France. This mention on 20 January 1917 stated that the General “had the honour to submit the name of No. 1784 Battery Sergeant Major John Oswald Clough, whose distinguished and gallant services, and devotion to duty, I consider deserving of special mention.”

There is no doubt that my father’s math brain helped very much in his artillery service. Artillery involves firing at targets which one cannot see many miles away. To bring a gun to bear on a target requires a trigonometrical calculation. Long before the advent of calculators, calculations were done using logarithmic tables, which was very laborious. My father had memorised all the important trigonometry functions and could calculate the approximate answer in his head. He would send the officers away to calculate something about the trajectory of the gun to know whether the result was in line with his mental calculation.

My Father didn’t talk much about the War or about his time in France, but he spoke a little French because he was there for three years. The only story I remember him telling me about France was that the reason he took up smoking was because the smell of the rotting bodies was so overpowering that the soldiers had to smoke to overcome

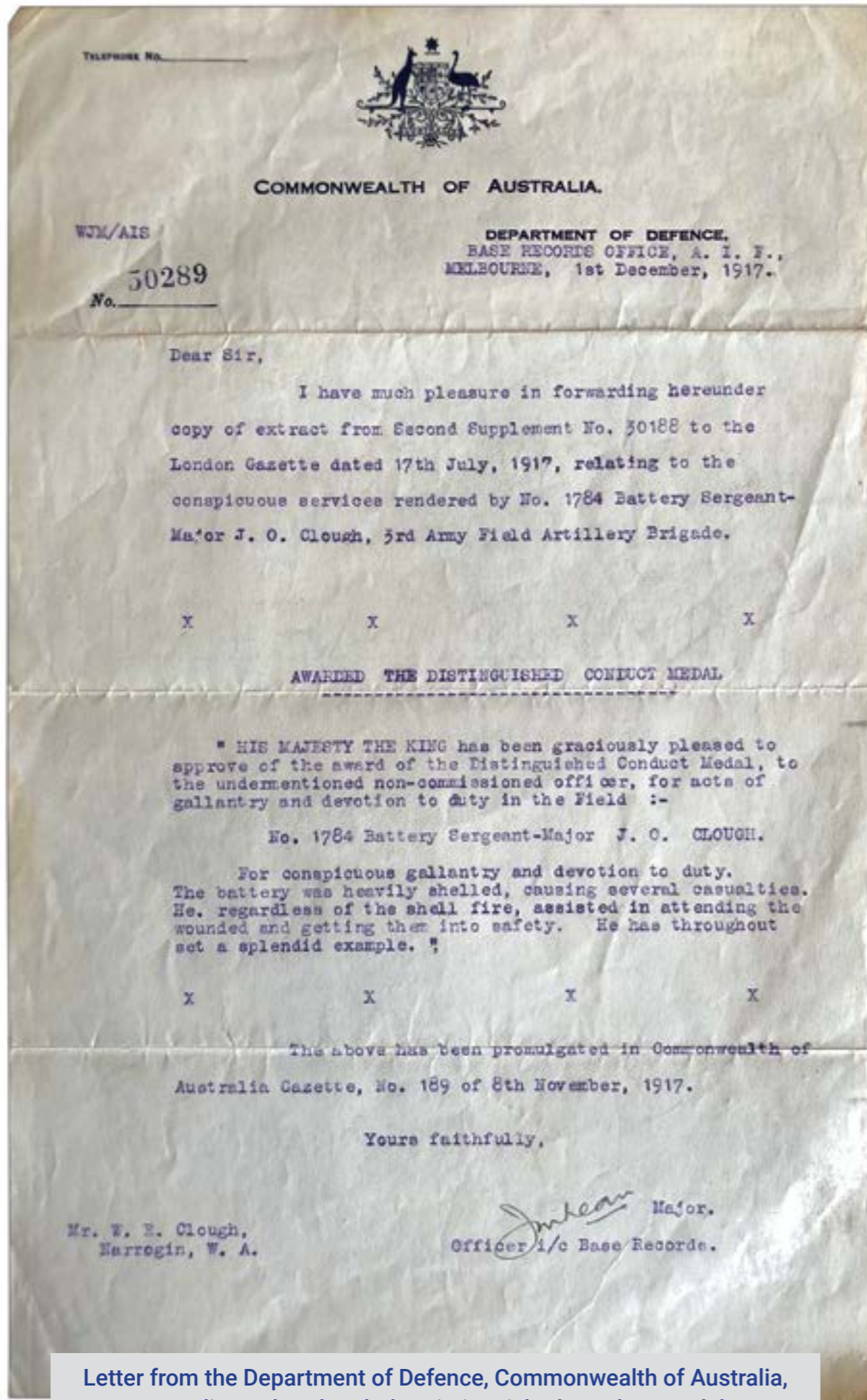
the stench. He also told Doug Atwell, one of his building employees, that when he was badly wounded at Flanders in France, ambulance men were about to leave him, assuming him dead, when he groaned. They gave him a swig of brandy to revive him and he later said he told them “That will do me for the rest of my life.”

On the Somme and the Distinguished Conduct Medal

My father was wounded in action in one of the battles in the Somme in 1917, and was awarded a Distinguished Conduct Medal at about this time for acts of *“conspicuous gallantry and devotion to duty in the field.”* The citation stated *“The battery was heavily shelled, causing several casualties. He, regardless of the shellfire, assisted in attending the wounded and getting them into safety. He has throughout set a splendid example”*



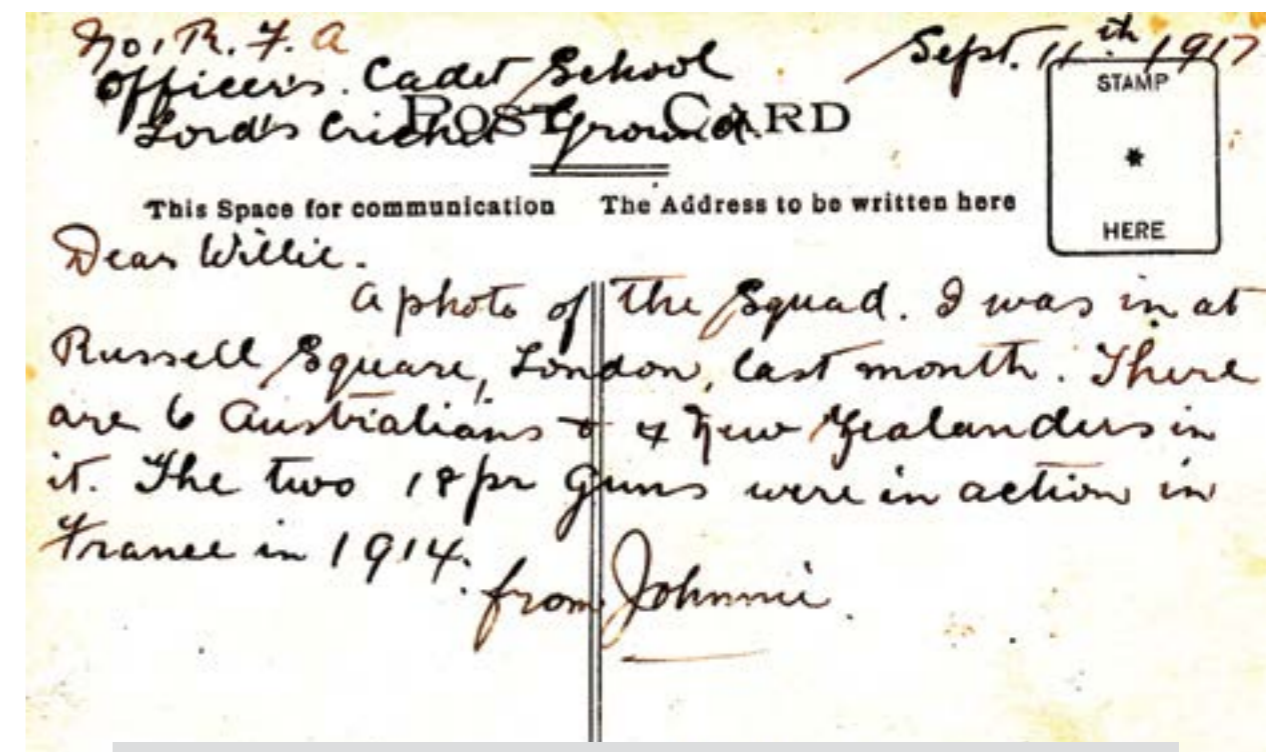
Sergeant Major JO Clough 1917



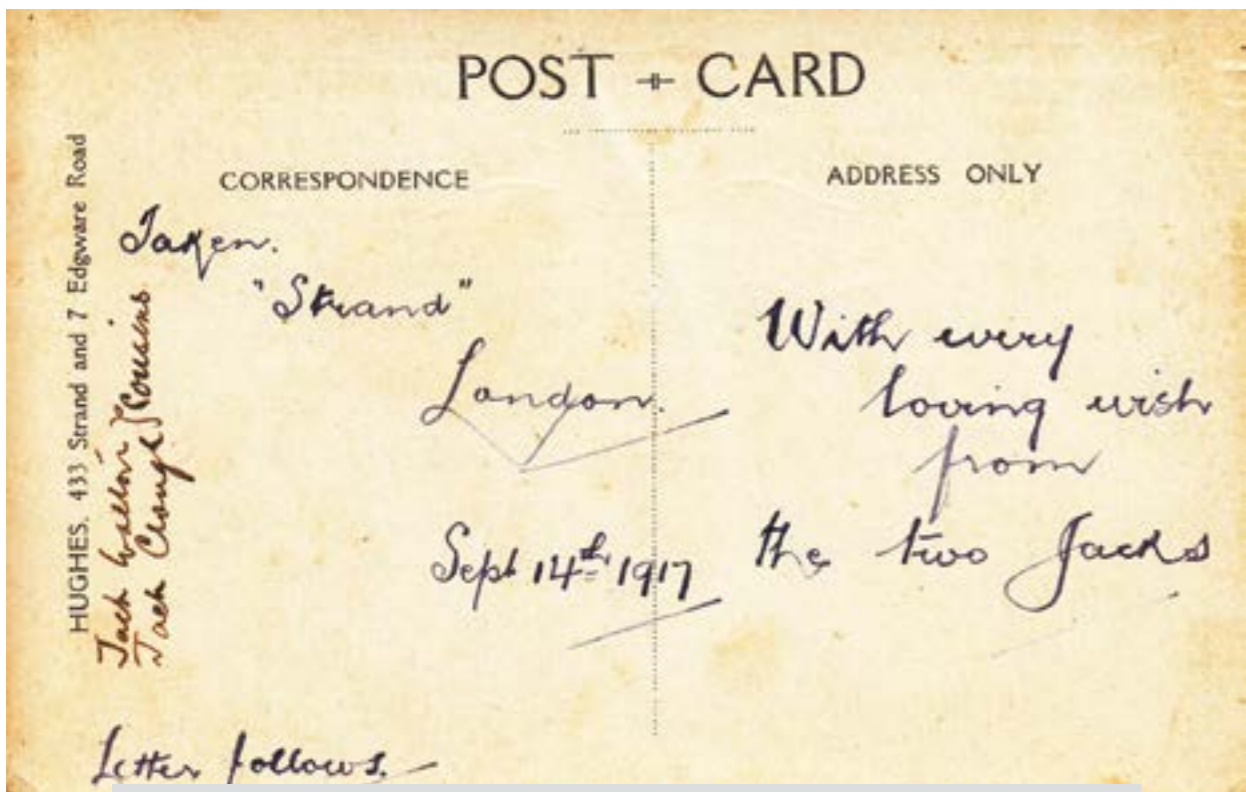
Letter from the Department of Defence, Commonwealth of Australia, awarding John Clough the Distinguished Conduct Medal



11 September 1917, Officer's Cadet School, Lord's Cricket Ground, JO Clough, back row, 6th from left



"Dear Willie, A photo of the squad. I was in at Russell Square, London, last month. There are 6 Australians & 4 New Zealanders in it. The two 18pr guns were in action in France in 1914. From Johnnie"



Taken The Strand, London, Jack Walton and Jack Clough, cousins, with every loving wish from the two Jacks, Sept 14th, 1917

23 July 1918

The war does not look like finishing soon; but we are slowly gaining the upper hand, with the gradual increasing help of the Americans, who are a very likely looking lot, and sure to make good. I've seen a lot of nationalities since leaving Aussie, but the English race is on its own, and the young offshoot down there under the Southern Cross is the best of the best as fighters. There is nothing to touch them. A lot will say they are wild and rough, but they are rough diamonds.

At the time of writing there has been a lull in the German offensive for a few weeks.

It is a very good sign, its significance being that there is a certain amount of discomfiture owing to one reason or other in the enemy's plans. Every day's delay in the renewal of their offensive strengthens our hands, and I see the day not far distant when the initiative will once again pass from them to us, and then the end will be in sight. They might delay the day, but it surely will come, and once the tide turns it might come quickly.

I've been through some hard times, and rough times, too: been like nightmares, but looking back on them I think I would not have minded being through them for anything, and I hope and want to be in it to the finish.

Sometimes I meet old pals of the Peninsula days and Egypt, and we live over again the times. Incidents that in those days nearly made us cry and our hair stand on end now cause us a lot of amusement, and help to while away a pleasant hour.

Have not seen a paper for a week or more, so you probably know more than I do.

This I know that you do not know, that we Australians are chock full of confidence in our ability to stop him if he tries to attack our little bit of front. I don't think he will. He has too much respect for our 'diggers' as fighters.

I am looking forward to the time when I will be with you all once more, a time which I hope is not far distant, when we can say, 'Our duty done brings peace of mind.'

I am 'in the pink', as the saying goes, nearly four years of it now, and all my wounds on the left side...



Five mates, John Oswald Clough, front right

The DCM is one below the Victoria Cross, but was better according to my father because recipients got paid a shilling or so per month, whereas the VCs got nothing.

My father was repatriated to England to hospital and, immediately after he was discharged, went to Officers' Training School at Lord's Cricket Ground from August to November 1917. He was commissioned and ended up a Lieutenant. It was unusual for enlisted men to come up through the ranks and become officers. Returning to the Front, he saw steady action through the first part of 1918 and survived the gas shelling in March and then the shelling and bombing of the horse and wagon lines in May. In late August, he wrote to his brother:

"The war is at a standstill as far as we are concerned, with the exception of the artillery fire. We are waiting on old Fritz to attack. He'll get a rough time if he comes at the Diggers. Fritz has not beaten us once this year yet, and we have stopped more than one of his pushes. It is becoming a very noticeable fact that wherever the Aussies are he has never pushed yet. Documents captured prove that he has great respect for our fighting abilities. This sounds like swank but the more I see of other troops the more proud I am to be an Australian."

He was gassed twice in early 1918, and it was not long after this that his name was again on the casualty list, wounded in action for the third, and ultimately final, time. Suffering from gunshot wounds to his left arm and knee, Jack was invalided to England and was back in Australia by 16 December 1918. He was discharged with the rank of Lieutenant on 30 April 1919.

In many ways I think my Father admired the Turks. The Turks beat them. I find it interesting that Anzac Day is the greatest celebration we have for our activities at war, and Gallipoli was a major defeat.

As well as a Distinguished Conduct Medal, my father was awarded the 1914-15 Star, the British War Medal and the Victory Medal. In 1995, the Royal Australian Artillery Historical Society of WA recognised my father by the official naming of the Colonel JO Clough Ordnance Collection at Hobbs Artillery Park, Karrakatta.



Lieutenant John Oswald Clough DCM, January 1918, The Strand, London

Clough Brothers

When my father got back from WWI as a newly commissioned artillery officer, he formed a building company with his brother called Clough Brothers, mainly building houses. That was in 1919. In about 1920 he built himself a house at 87 Archdeacon Street, Nedlands, as well as the house next door at 85, where my Uncle Bill lived. In the early 1920s they built a lot of houses in the Nedlands area, and additions to Nedlands School, which are recorded in the Nedlands history.



1922, John Oswald & Lucy Clough

Marrying Lucy Hayes

As I mentioned, my father met my mother, Lucy Hayes, through her brother Bill whom he had trained with in Perth and fought with at Gallipoli. She had left an indelible impression on Jack the first time that he saw her, seated on his kitbag in the tent he shared with Bill at Blackboy Hill Camp in 1914.

Lucy was born on 3 April 1891 in Landsborough, Victoria, and they married on 22 February 1922.

03

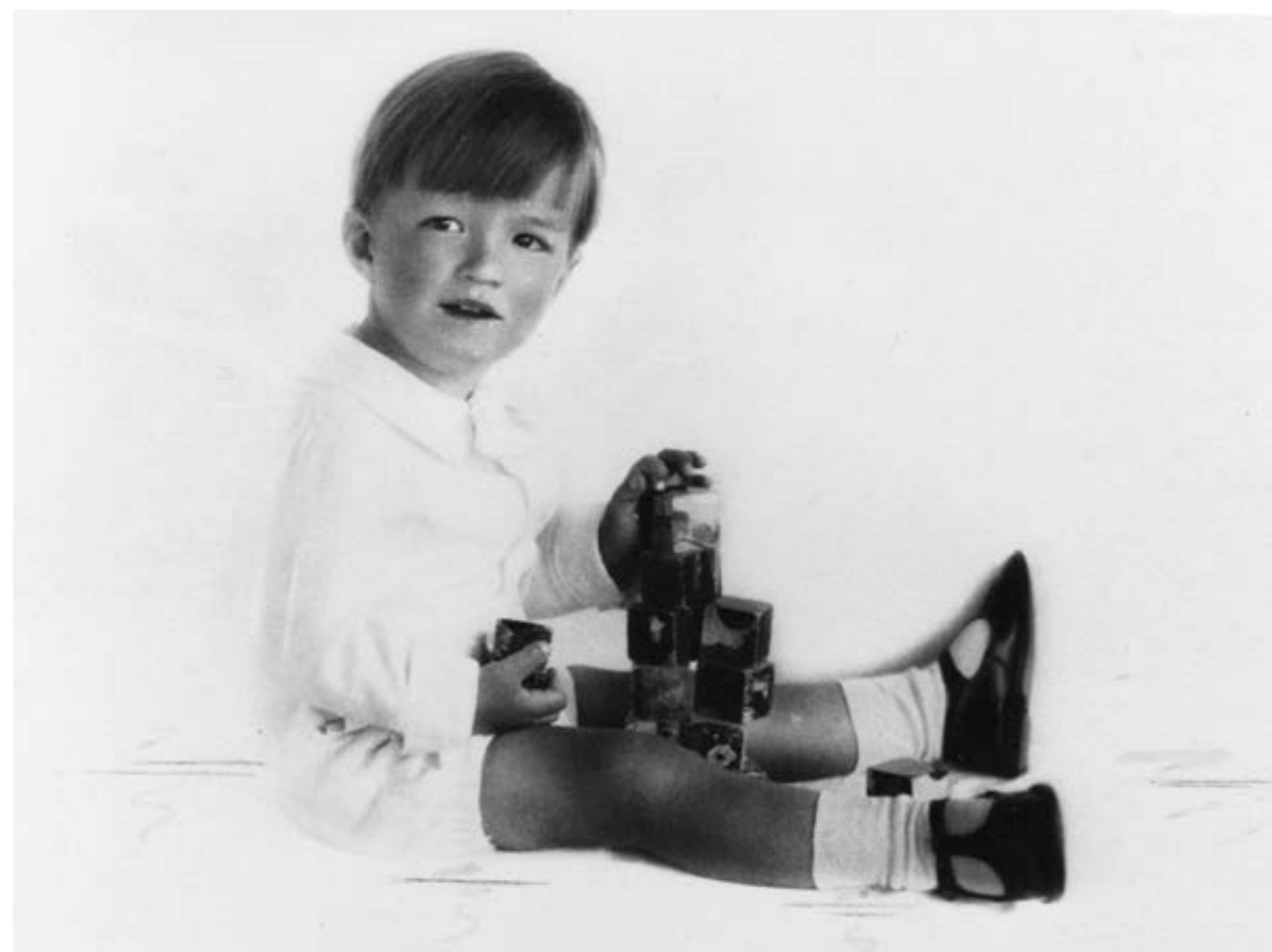
MY CHILDHOOD



Main street in Landsborough, Victoria about 1900



Landsborough street parade about 1900



Hayes family

Lucy's father, John Hayes, was born in 1827 in Armagh, Belfast, Ireland. He moved to Australia where, on 2 September 1869, he married Mary Ann Elizabeth Curnick, born 1851 in Landsborough, Victoria. Mary was 18 and John was 42, and they had 11 children; Lucy was tenth and my Uncle Bill was eleventh. This was actually the second family of John Hayes. He had had two children with his first wife, and later married his son-in-law's sister.



Mary Ann Elizabeth Hayes nee Curnick, 1851 - 1903, mother of Lucy Clough



John Hayes, born 1827, Armagh, Ireland



Lucy Clough nee Hayes, 1891 - 1951



Amy and Lucy Hayes



Lucy and Doll Hayes

Lucy

My mother Lucy was lovely, and, in some ways like your mother: soft, kind, caring and very popular with her nephews and nieces. My cousin Peta would talk very favourably about her "Auntie Noo", but for some perverse reason I grew up always more fond of my father than my mother. Looking back I can't understand why, but I was conscious that I was.

My mother and father had a tough life. Their first child, Joan, was born on 26 April 1923. She was damaged at birth and could neither stand nor sit.

I was born on 30 September 1926 and grew up at 87 Archdeacon Street next to my Uncle Bill. My father was a great character. In many ways he was a reprobate. He used to chain-smoke; he would gamble too much and he drank too much, but I must say that in all the time I knew him I never once saw him drunk. He would play the horses and work, but he didn't do much else. His only other interest was the militia. He used to spend any spare time at army camps, which he was keen on and good at.

My memory of my older sister was that she was always in a pram, which as she grew became a pram twice as long as normal prams. She cried almost constantly. The doctor who delivered Joan had been a close friend of my parents, and my father always thought he was incompetent and blamed Joan's impairment on him. At weekends my father would spend hours wheeling and rocking the pram, and he'd just manage to get Joan to sleep when Bill, who was a car fanatic, would start up his car next door, which would backfire as cars did in those days, and wake Joan. She was a few years older than me, and Judy is five years younger, born on 14 June 1931.



John Oswald Clough



Lucy Clough nee Hayes



John and Lucy Clough, Cup Day, 1 January 1921



Lucy in front of 87 Archdeacon Street, Nedlands



John Clough on the verandah of 87 Archdeacon Street



John Clough



Lucy Clough



John Oswald Clough, 1920

Joan died just before her seventh birthday on 9 April 1930, which was undoubtedly a relief. I remember we used to go to Karrakatta Cemetery regularly to place flowers on her grave when I was a kid.

On Sundays, I would go to Sunday school at St Margaret's Church on the corner of Elizabeth and Tyrell Streets in Nedlands right until I went to university. My mum would go every Sunday, usually with one of her sisters, Tess or May. My father went rarely. May used to stay with us quite a lot. Another sister, Dot, lived in Belmont and

married a fellow called Ned Miles whom we saw when we had a car, which was off and on a bit. When we ran out of money we'd get rid of the car.

My father worked or, when there was no work, went to the pub. He would go to Steve's Hotel on the foreshore in Nedlands. In primary school we would swim at the Nedlands Baths. The whole class used to march down to the river past Steve's Hotel. Many times the other kids in my class would say: "Hey Cloughy. There's your old man's car outside the pub." This was at about two o'clock in the afternoon. He used to start drinking early.



Harold's 1st birthday with Aunt Gert, cousin Carol, and John Clough nursing Joan



Carol and Harold astride horse being held by John Clough



Harold and baby Judy



John Clough with baby Joan



Carol Hayes and Harold on trike



Harold in a very smart coat



Harold and Judy



Harold, Judy and Peta Hayes



Harold and Judy



Carol, Harold, Peta, John, Judy, Gert and Aunt Tess

Uncle Bill

We used to see a lot of my Uncle Bill because he lived next door with his family. Uncle Bill was an accountant and was married to Gert and had two daughters, Carol and Peta. Carol was a year older than me and Peta was a year younger or thereabouts. Gert and Bill were complete opposites. Bill was like my second father, but Gert definitely wasn't like my second mother.

Bill was different to my father. Bill and my father were best friends, but they were like chalk and cheese. Bill was very active; he was involved in everything. He was on the Perth City Council and President of the Royal Automobile Club and the Fremantle Golf Club. Bill loved golf and, not having a son, used to take me caddying. He took us shooting and swimming at North Cottesloe Beach every morning before breakfast at 7 o'clock, usually Carol, Judy and me. I remember the whole of Uncle Bill's left side was pockmarked with shrapnel wounds from the War in Gallipoli. His left knee had been shot away and he walked with a stiff left leg ever after, but lived to the ripe old age of 93.

One morning we went into the surf and it was a bit rougher than usual. Judy got out of her depth, and while she wasn't drowning she was in difficulties and I noticed and dragged her out. I remember she said "You saved my life. You saved my life." She was probably only 6 or 8.

Uncle Bill was very keen on cars, and that's how he got to know Norman McRae, my father-in-law. They went hill climbing some weekends. Cars in those days had so little power they couldn't get up steep hills, so they used to have competitions where they'd have hill climbs.

When I look back, Bill Hayes was smart and ahead of his time. He had an accounting practice, W. Hayes and Co. Today it would be referred to as a merchant bank. He had clients who had made a lot of money and were rich, and clients who were starting out and needed money for their companies, and most of his business was putting the two of them together and working out the agreement as to how it should be shared. This is what he did with Humphrey Parkes and me at the farm in Bullsbrook, which worked out so successfully.

Aunt Tess

Tess had a dairy farm in Spencer Road in Cannington. She had several very calm horses. On one occasion she wanted me to take some hot tea in a billycan out to the workers. That was all right, except at one stage I shook the billycan a bit and the boiling tea went onto the horse, which bolted with fright, and the more he galloped the more spilt. I would have been about 10 at the time. We used to go there fairly regularly when we had a car.



Judy and Harold at Tess's farm

Judy

Judy was always much brighter as a student than I was. She was five years behind me, so she would have started at Nedlands Primary School just a year before I left. In my last year at Nedlands, which would have been Year 6, she would have been in Year 1. In the final year at Nedlands there was an entrance exam to Modern School, which was the elite school at the time. I tried, but didn't get in and so went to Claremont Central School, but Judy passed and went to Modern School. She started in 1948, which was an outstanding year. I think Garrick Agnew, Bob Hawke and Rolf Harris were in her year. After she finished, she really should have gone to university but instead of that she went and worked in the Commonwealth Bank. When I went to university I sort of broke the mould, because no one I knew had ever been to university.

Nedlands Primary School and Claremont Central

I went to Nedlands Primary School, on the corner of Elizabeth Street and Kingsway, when I was six years old in 1932.

Of course the early 1930s were the years of the Depression. My father was in the building industry, which was particularly depressed. There was no work at all and there was no dole. I remember years later, when I was cleaning out the garage, seeing a letter my father had written to the AMP asking for a loan against his life insurance policy. The AMP had asked what the loan would be used for and my father had responded "To live!" My father joined the militia then; he didn't get paid much but he got something.

When I was about eight I would normally walk home for lunch, because it was only

10 minutes away, but on one occasion my mother made me lunch and put it in a brown paper bag. I took it to school and ate my lunch and, as we were instructed to, I threw my rubbish into the incinerator to burn it. When I got home my mother asked me how I liked the lunch and what I had bought with the surprise penny she had put in the brown paper bag. That was a lot of money in those days and I had thrown it away!

I went to Claremont Central, which was on the corner of Bay View Terrace and Princess Road, when I was 12 in 1939, the same year that World War II started.



Harold, John and Judy Clough

Nedlands Primary School, 54 kids, Harold Clough, 2nd back row, 6th from right



Harold on his new bike outside 87 Archdeacon Street, Nedlands

World War II

In the early 1930s there was just no building work. The Depression was three or four times worse than anything we've seen since. There was no work and no dole, so we had a tough time.

My father joined the local militia with the 3rd Field Brigade stationed at Karrakatta and got promoted quickly because he was the only one with field experience. He enjoyed the Army much more than he enjoyed private business. When World War II broke out in 1939 he was a Major, and almost immediately got promoted to a Colonel and commanded the 3rd Field Regiment.

At that time the 3rd Field Brigade Royal Australian Artillery consisted of the 7th, 8th and 9th Batteries of 18 pounder guns and 103rd Howitzer Battery. The guns were horse-drawn, and there was quite a large team of horses at Karrakatta. The horses were looked after by a permanent Army NCO Houlahan, who was quite a hooligan, and I used to enjoy going over after school and helping him groom the horses. I remember going riding in the late 1930s when I was probably 10 or 12 with my father and a group of officers. In those days you could ride from Karrakatta all the way across to City Beach. For me it was a great adventure!

The Brigade often used to do its manoeuvres at Northam or York, and I remember I fired my first 18-pounder in about 1937 when I was an 11-year-old at Northam. It gave me the fright of my life. They used to have a firing range just south of Rockingham and I recall going down there for the annual shoot.

When WWII broke out on 1 September 1939, all the militia was called up and a contingent was put together to go overseas.

Urine test and Roger Fitzhardinge

My father desperately wanted to be selected for active service overseas. I remember Roger Fitzhardinge telling me that when they were all going up for their medical, having applied for overseas service, my father was concerned because he knew that he had diabetes and as part of the medical examination they had to have a urine test. He was quite sure he would fail, so he arranged with Roger, who was about 20 years younger and, he thought, a fit bloke, to borrow his urine. Well, they did that, but my father still wasn't accepted, probably because of his age rather than the quality of Roger's urine. Roger said "You can't get closer to your CO than sharing your piss with him!"

The 2nd/3rd Field Regiment embarked for the Middle East in late 1939 under the command of Colonel Athol Hobbs. My father wasn't among them, because I think he was classified at that stage as being too old for active service at 52, but he was promoted to Lieutenant Colonel and commanded the 3rd Field Regiment in Western Australia as a training and replacement regiment.



Back row: Bill Hawkins, Huggat, Humphreys, George Kiley, Ian Bessell-Browne, Harry Coombes, Dick Bale, Bob Davis, Tom McPharlane, Front row: George Nunn, Athol Hobbs, A.J, Bessell-Browne, John O. Clough, Eric Montifiore.

John Fitzhardinge

Roger's older brother, John Fitzhardinge, was sent to Egypt within a few months of the beginning of World War II, in the first group of the 2nd /3rd Field Regiment with Athol Hobbs as Commanding Officer. Then they went to Greece and fought the Germans from northern Greece to southern Greece for a few months before being evacuated to Crete. The German army couldn't get to Crete by ship because the British Navy controlled the Mediterranean, so they flew in paratroops. The first wave were all captured and the Australian forces believed they were on top of the situation, but subsequently the Germans sent in 10 times as many planes and troops. They

were much stronger than the Australian forces, who retreated from the northern side of Crete to the southern side. Once there, John Fitzhardinge commandeered a barge, and then an engine, all under German fire, and installed the engine and sailed to Egypt. He was dead unlucky because halfway to Egypt they got held up by an Italian submarine which put a shot or two across their bows, and so John Fitzhardinge, as the Commanding Officer, stripped off and swam across to the submarine and persuaded the Italian submarine captain to not sink the barge, which would mean killing all the crew, but to take him hostage instead and let them sail on. He was a prisoner for the rest of the War — a real hero.

Holidays at the Naval Base

In about 1941, my father was Commanding Officer of the 2nd/3rd Field Regiment Royal Australian Artillery of about 200-300 men. He rapidly rose to the rank of Colonel of the 3rd Field Regiment, which was the artillery unit in Western Australia. His innate knowledge of gauging, setting and firing artillery pieces was vital to the training of reinforcements.

The Regiment was encamped at the Naval Base, about five kilometres south of Fremantle. I was about 15 years old and for my school holidays I went to stay with my father in the camp.

I was probably a bumptious kid and, with my father the Commanding Officer, objectionable. I was tall for my age, and on one occasion a new, young padre had been appointed but had not arrived, so my father dressed me in his uniform with a white collar and took me into the officers' mess and introduced me as the new padre. I was sensible enough to say nothing, but a number of the officers came to meet me and asked to see me later. I felt like saying "Yes, my son." My father thought it was a great joke.

When he thought I was getting too big for my boots, he told me the next morning they were going to do manoeuvres east of the Naval Base, where there was a lot of swampy country and to get across the swamps they would need to go across on stilts – not only on stilts but web-footed stilts to stop sinking too deep into the mud. In my innocence I took all of this in, and he sent me down to the Quartermaster Sergeant to tell him to issue the officers "stilts, web-footed, mark 2." Full of self-importance, I instructed the Quartermaster

Sergeant. He was busy, and not as gullible as the officers, and told me in no uncertain language what I could do. When reality hit me, I was embarrassed beyond belief, but it undoubtedly did me good and I was a little less bumptious.

Narrogin

After a year or so at the Naval Base, the 2nd/3rd Field Regiment moved down to Narrogin, 192 kilometres south of Perth, and set up camp in the showgrounds there. They were all sleeping under canvas again. I would go there for school holidays. As a 14 or 15-year-old, I loved it. I had a uniform and I used to go with various groups.

It was only 192 kilometres, but the train stopped at every station so it used to take all night – six-to-eight hours. On one trip I was lucky enough to run into Alan Scahill, who was returning from leave. I was travelling economy and he was in first, so he promoted me to first and we had an enjoyable time on the long, tedious trip.

They had just been issued with new 25-pounder guns and Marmon Herrington four-wheel drive trucks to pull them. In Narrogin I saw my old mate Houlahan again. He no longer had horses, but had become a driving instructor and taught me how to drive, on a Marmon Herrington truck with a gun and limber behind. They must have been mad. You know, here was I, a 14-year-old kid, never driven in my life. But for me – I had a ball.

When you went downhill with a gun and limber and wanted to brake, the gun would overtake the truck and so you had to put the airbrake onto the gun and accelerate the truck to stop being overtaken. This was fine in theory, but if you were already going



John Clough training at Narrogin, back right



Harold and John Clough

downhill too fast it became quite exciting. I am probably one of the few people who learned to drive an artillery tractor before I could drive a car!

They used to go on shoots, and would shoot live ammunition at targets. In the Artillery the guns used to fire shells about 7,000 yards, which is over six kilometres, from say Mosman Park to Applecross. They used to have an Observation Post as close to the enemy as was safe while the guns were behind, out of sight and out of range. They used trigonometry to calculate how to set the guns to shell the enemy. We were out there on the range firing one day when they changed the target from 400 metres to 200 metres in front of us. We were all standing there when this salvo of shells came over, and you just knew

they were going to be awfully close. All the officers dropped to the ground and I did too, but my father just stood there watching. He didn't flinch.

He also developed a system of mock tank attacks, where he built mock tanks that were very big boxes on sleds, and attached to the sled was a long wire, which went past the guns to a truck behind the guns facing the opposite direction. At the appropriate sign, the trucks would take off and the wire would pull the sleds over the rise in front of the guns. They used to see how long it took the gunners to realise that an attack was on and put a shell through the centre of the tank. They were very exciting times.

Anzac Day parade during WW2, corner Hay and William Streets, Perth, John Clough at the front



Anzac Day parade during WW2, as pictured in the Sydney Morning Herald newspaper. John Clough centre under the banner



John and Lucy Clough after the Anzac Day parade

Doug Klem and learning about machines

When I was about 16, my Uncle Bill bought a couple of outboard motors, which in those days were new technology. They both broke down, so Bill gave them to me and asked me to fix them. I pulled them apart and had them spread all over the back verandah. I decided that I needed help, because there were lots of parts I didn't have and you couldn't buy them. During the War you couldn't buy anything.

I found a fellow called Doug Klem, who had a little machine shop in Hay Street. He had a lathe and drills and a lot of metalworking equipment. Doug was a great guy and could make practically anything. I went in and started working for him on a Saturday morning or afternoon. I didn't get paid, but I learnt a lot. While I was there I could use

his equipment to make the bits I needed. He specialised in fixing outboard motors, so out of the two motors that Bill had we made one that worked, and Bill was pleased and I was pleased.

Bill also had a gas-producer on a trailer on the back of his car. You fed gas-producers with charcoal, and they drove your car when you didn't have petrol.

Boy Scouts

When I was still at school, from the time I was 12 or 13 until I was 16 or 17, I was in the Boy Scouts and we used to go to a Boy Scouts meeting each week down in a hall where the university extension is now. I was a troop leader and the Boy Scouts taught me all sorts of things, like tying knots.

The episode I remember best was a weekend exercise when I and one of my troop were given sealed dispatches and told to go to the Perth Railway Station at 8 o'clock and open our dispatches, which we did. The dispatches instructed us to take a train to Mundaring; from Mundaring we were to walk to Mundaring Weir along "Macadamised Road". We couldn't find the road, but someone pointed out the road to the weir and it was only after we got back and I complained to the scout master that I couldn't find "Macadamised Road" that he told me that a macadamised road was bitumen!

It's about 10-15 kilometres from Mundaring to the weir. It should have taken us three hours, but it was mid-winter and there was torrential rain, and because it was so wet and overcast it got dark early, so I decided that we ought to set up camp while we could still see what we were doing.

I went off the road and up a hill, and searched for a level area where we could set up our tent. As we started looking, we took off our backpacks, which were heavy with all our camping gear and food, and put them on the ground. I had a map and my instructions and I put them on the top of a Blackboy tree. It was hard to find a level enough place to put up a tent. We walked around for 10-15 minutes and then we couldn't find where we'd put our bags down. The only thing that saved us was that we finally saw the map I'd put on top of the Blackboy.

We put up our tent, and the rain was still coming down in torrents and we realised that all the water was running through our tent. We had a shovel, and we were able to dig a trench at the upside of the tent to drain away the water.

As boy scouts we'd been taught to light a fire even when it was wet, which was no mean feat given the volume of rain. We finally got a fire going, cooked sausages and went to bed and slept like logs. The next morning we walked to Mundaring Weir, which was flowing spectacularly. The pumping station had a very high chimney and we had to measure its height, which was quite a trick. We had a few other tasks that took us along the river for a couple of miles. Then we caught the train from Mundaring Weir to Perth. When we got into the station, the parents of the younger fellow I was with were completely distraught. They didn't think they were ever going to see him again. Scouting was good. It taught me lots of things.

Scotch College

In 1942, when I was 16, I had a year at Scotch College. I did Cadets, and because I'd told the headmaster when I enrolled that I wanted to go to Duntroon, they made me a Sergeant in the Cadets, as was my mate Bruce Rogers. We wore kilts.



1942, Cadet Sergeant
Harold Clough at
Scotch College

Rowing at Scotch College

I rowed for Scotch in the second eight in 1942 when I was 16. I rowed 6-seat in the second eight, which is on the stroke side behind the stroke. The stroke was Bruce Rogers, who was my best mate and a really wild man. He was well known because he got called to the Headmaster and threatened with expulsion on a monthly basis.

I recall one time he nearly got expelled: Bruce used to travel by train to Scotch from where he lived in Guildford. In those days we used pen and ink, and we had found that if you broke the nib off the end

of the pen, you were left with two very sharp points. If you rotated it between your hands, it could drill a hole in wood. Bruce drilled a hole in the wood from one carriage to the next, and when he looked through the hole he saw an eye peering back at him, and spat at it.

When we were in the eight, we used to row past The Coombe. In those days there was no road down to the river. If you climbed down the cliff there was a Chinese garden and a couple of fellows lived there, fishermen. They kept a wooden rowing boat on the beach. As we were rowing past, a couple of kids about our age were in this rowing boat about 20-30 metres offshore, and they started giving us cheek.

Bruce said "We'll get them" and turned the eight around, which took us about five minutes because a rowing boat is not manoeuvrable. We went back to the boatshed and got two fours out instead, including 'Golan', a brand new four and the pride and joy of the boatshed. We rowed along close to the foreshore so they couldn't see us coming, our intention being to catch the boys in their boat between the two fours and beat them up.

We had a fellow called Squeaker (Bob Mofflan) as our cox, and we took the fours and rowed quietly along the foreshore. We were just about at Becky's house when Bob said "They've seen us. Go!" We'd only done about 20 metres when the brand new four rammed the fishing boat and was about ½ metre deep into it, making a hole the size of a steering wheel. When you row you can't see where you are going, and when we hit the boat, we stopped instantaneously.

We picked ourselves up, and the two fishermen were yelling about their boat.

We got our oars, pushed ourselves off and rowed back to the boatshed to assess the damage. There wasn't a scratch on it! Rowing boats are very fragile, but lengthwise and head on they are obviously very strong. We got reported, but Bruce wasn't blamed – we all got blamed.

Leaving Scotch

I was only at Scotch for a year although the leaving was a two-year course, but because there were so few kids in the school, the two years of leaving were both in the same class. After the end of the first year, they said "Well, why don't you have a go, just for practice?" I sat my leaving (now the TEE) at the age of 16 in magnificent Winthrop Hall at UWA, and I was awestruck. I remember our teacher saying "When you read the exam question and simply cannot understand it, let alone answer it, before panic completely demoralises you, sit back, study the beautiful Aboriginal motifs on the ceiling, and then quietly read the question again."

I passed, but not very well. I was 16 at the time and it was 1942. The War was probably at its most desperate and all I wanted to do was to go into the Army like my father. So I applied to Duntroon Military Academy, where officers were trained.

In 1942 it looked like we were going to lose. The Japanese had just come into the War and they'd taken everything in Southeast Asia except Australia so we were expecting them to land any day. I remember the teacher asking what we were going to do when the Japanese landed in Fremantle, and someone responded "I'm going to throw stones at them, Sir."

I was rejected for Duntroon. They said "You're too young; come back next year." I had to decide whether to go back to school for another year or work. I wasn't quite sure what to do then. I didn't really want to go back to school, because I reckoned I'd already passed. My mother had always told me "When you grow up, whatever you do, never ever be a contractor like your father. Get a good steady job in a bank or an insurance company."

Up until the War, we were still feeling the effects of the Depression of the 1930s when unemployment went up to 30 or 40 per cent. Everyone was unemployed. My father was completely unemployed. Those people that did have a job lived well, because everything was dirt cheap. Australia as a country wasn't doing well. We couldn't sell wheat or wool. In the Depression the only thing Australia could sell was gold, and Kalgoorlie boomed.

After the War, things were pretty chaotic. You couldn't buy petrol or cement or bricks – you couldn't buy anything actually. Everything was controlled by the government. Everything was rationed. But there was no shortage of jobs. My father started building again – not housing, which he'd done previously, but industrial and commercial buildings. All sorts of factories were being put up and he started building them.

Uncle William (Bill) Edwin Clough

This reminds me of a story about my Uncle William, my father's brother. When building work got scarce in 1931, my father's brother Bill, moved to the goldfields with his four children, Molly, Ada, Jack and Audrey. They moved to Burbidge first

and lived in a converted water tank. All four children helped with the gold mining chores. They subsequently moved to Marvel Loch, seven kilometres away, and William stayed there for the rest of his life. He became Shire President and ran the gold battery and was quite a figure in Marvel Loch. His son Jack carried on after he died, and made a big breakthrough in finding the lost reef.

Molly, Ada, Jack and Audrey are my first cousins. Audrey is still alive and lives in Mandurah. She married a farmer. Jack lives in Hopetoun. Molly and Ada both lived in Esperance, and Ada's son is Brian Davies, to whom we have lent money and have a 25 per cent interest in his company, Davies Wear Plates Pty Ltd.

My father always said he had a tough time with his older brother William, and my sister Judy once pointed out to me that when our Uncle William visited us in Nedlands, our father started to stutter as he had as a boy, which I found interesting because he had a particularly strong character.

Isobel and Gerry McShane

My father never mentioned his younger sister, Isobel. Her real name was Mary Elizabeth Isabella and she was born in 1889, two years after my father. For some reason Isobel was cast out of the family. I think she was a dancer and married an Irishman called Gerald McShane, who was a real character and a great storyteller. I never met my aunt, but I recall my father expressing surprise at the number of people who attended her funeral. I think he felt a little sad. She died in 1945, just as the War ended and well before we met Gerry, who later lived with us for a while at 93 Stanley Street.

I'd never heard of Gerry McShane when he rang up. He asked me who I was and I told him, and he said "I'm your uncle. I'd like you to come in and see me so that we can have a talk." He explained that he was in Royal Perth Hospital, and I was curious enough to go. I went in and sat down and we talked for an hour or so. Then I got up to go and the elderly matron said "I'm pleased you're taking him with you." "I'm not taking him," I responded. "I've got four kids and I've got no room in our place. I only met him an hour ago." The matron was adamant, because Gerry had told her that I was his only living relation, and I had no chance of getting out without him. I arrived home and said, "Marg, I've got a guest. This is my uncle." Gert, who lived next door, was completely skeptical. "It's all a lot of nonsense," she said. And he was a bit of a conman.

Gerry was living east of Kalgoorlie and had three or four camels that he used to cart things around with. He'd had a stroke, which was why he was in Royal Perth. Having a stroke was his worst nightmare, because he couldn't do anything any more. He had a beautiful speaking voice, and in some ways he seemed like a lovely old gentleman who had fallen on rough times.

Marg felt sympathy for Gerry and he moved into the sleep-out at 93 Stanley Street, Nedlands. He had lost a leg, drank a lot and was a chain smoker. He became a family member for a while, but eventually his smoking caught up with him and his bed caught fire when he fell asleep smoking. Marg agreed when he had nearly burnt the family house down that he would have to move on. I had a bush block in Kewdale, where the yard with equipment and trades were based, and Gerry moved into a timber hut there. We used to take the family to visit him on Sundays.

04

LIFE AFTER SCHOOL



Working at the AMP, 1943

I decided not to go back to Scotch College and sit another leaving exam. Instead I got a job in the AMP, one of Australia's biggest insurance companies, as a junior clerk, a very junior clerk, processing insurance premiums and it was instructive. I can tell you a couple of stories. One of my jobs was to send out overdue premium notices. When a policyholder didn't pay a premium on time, AMP sent out an overdue premium notice. A normal premium notice was printed with an AMP envelope that included the premium payment due, but they found that many policyholders threw the envelope away without opening it. My job as a junior clerk was to handwrite a plain envelope and enter the premium that was due onto the overdue premium notice, which I had to look up in the ledger showing outstanding premiums. I think it included a penalty for late payment. I used to do this at a table with three or four girls who talked incessantly, but each one produced two or three times more than I could because I was bored stiff.

My claim to fame was the day I wrote an overdue premium notice for £7.8s.6d. as £786. The irate policyholder who came in to see the manager was hard to appease. I was called in and told I was the dumbest clerk that had ever worked at the AMP as I couldn't even copy a number from the ledger without making a silly mistake.

The great thing I learnt in my year at the AMP, where I had never been so bored and where the time had never passed so slowly, was that I didn't want to spend my life as a clerk in the AMP.

One of the girls at the AMP whom I got very friendly with and used to take out

was Betty Balstrup. She was probably 21 and I was 17, and at that age four years is a big difference. She suggested that I should try to go to university, which no one in my family or acquaintance had ever done. I recall talking to my father about it, and he took me to see William Somerville, who was then a leading member of the University Senate and after whom the Somerville Auditorium was named. He had been my father's neighbour in Alfred Street, Mosman Park, which was where my father had lived when his family moved from Victoria. Somerville also encouraged me to go to university, which none of my family ever had and was unusual. When I started there were half a million people living in Perth and less than 1,000 went to university.

Jimmy Jamsticks

In the early 1940s, when I was working at the AMP, a group of us, about a dozen boys and girls, rode our bikes up into the foothills to Brookton and had a picnic there. We went for a walk down a river where there were orchards that were fenced off. There was a large orange plantation, and my mate Peter Toy found a place to crawl under the fence to get to the oranges. He picked half a dozen and threw them over the fence to me. Anyway, the owner of the orchard found out and as he knew his way around the orchard a lot better than we did he got between us and where we'd been picnicking and left our belongings.

He grabbed Peter Toy and asked "What's your name?" and Peter said "Jimmy Jamsticks." That really infuriated him, and he got us to tell him our names and then he asked me where I worked. Apparently he was the AMP agent for the district and was very proud of his AMP position and

the company, so the thought of an AMP employee stealing oranges made him angrier than ever. He took our names and addresses and told us he was going to report us to the police and prosecute us.

That night I told my father. He was in the Army at the time, but was home on leave. He was concerned, because he knew a stealing prosecution wasn't good on your CV, so he rang the fellow up and asked if we could come and see him and apologise. I think in the end the fellow just let us off, but I haven't stolen an orange since.

Engineering at the University of Western Australia

I decided that whatever I chose to do I wanted to get out of a city office and into the field where I could actually produce something. Engineering was my first preference and I decided that it was a much better future than going to Duntroon and being a permanent soldier. This was the beginning of 1944 and the War still had nearly two years to run. Whereas in 1942 it looked as though we were going to lose, by 1944 it was clear that we were going to win. It was just a question of how long it would take. The prospect of being a permanent soldier in peacetime wasn't as attractive as being an engineer.

At the beginning of 1944 I applied to go to the University of Western Australia to study engineering, but at that stage the quota for first year engineering was 40. Since I had not passed my leaving well, when I applied to go into engineering and went to see Professor Blakey, who was the Dean of the Faculty at the time, he said "No, Clough, you're 43 out of 40, and there won't be a place for you." So I reluctantly applied to do science. A week or two before the

commencement of the first term I had a call from Blakey again, asking me to come and see him. He told me that there had been some withdrawals and I could now be accepted. I said "Thanks very much, Sir. I very much want to do engineering." He responded "Well, Clough, you're number 40 out of my total of 40, and there's no way you're going to get through engineering."

My reaction was "You old bastard," but I turned up, the keenest student in the whole engineering school, with the threat that if I failed I'd finish up as a junior clerk in an insurance company! I was the type who sat in the front row and took down every word that the lecturer said.

While I initially thought that Blakey was an old bastard, he was the only person at university who had a car was Blakey. He was smart and a good lecturer.

University Rugby Club

The conventional wisdom among the students in those days was that if you wanted to pass in engineering you had to be either a good student or a good rugby player. Professor Blakey was a Queenslander, a rugby fanatic and patron of the University Rugby Club. He had the reputation of never failing a good rugby player, so I decided to cover my bets and immediately took up rugby. I'd always played Australian Rules and had never so much as watched a rugby match, and had no idea what the game was about, but I finished up winning a half blue for rugby at university. I think I got a bigger charge out of getting my half blue than my degree.

Good participants in any sport got either a half or full blue. You got a half blue if you were good in your team, and a full blue if you



1946, UWA Rugby Clough, Harold Clough, middle top, and Professor Blakey middle front

were a state representative. When I got my half blue, the committee of selectors was divided over whether Shirley Strickland, who had a half blue, should get a full blue. I don't think she got a full blue until the next year. She hadn't been able to qualify as state representative since there had been no national competitions because of the War. Having got her full blue, she went on to win three Olympic gold medals.

Engineering Initiation Rites

One indelible impression was the engineering initiation rites, which involved a 'branding'. First of all you were stripped, and I remember being painted: one half red and one half blue. They stamped your forehead with UEC, which stood for

University Engineering Club, in indelible ink. Then they made you sing The Engineers' Song, and every time you made a mistake or couldn't remember the words the cry went up "PURGE HIM" and something foul was put down your throat — I think it was castor oil — and you were made to do it again. When you'd gone through that phase, which took half an hour or so, you were pushed into the branding room and told you were going to be branded. Four big hulking brutes threw you down onto a bench and declared they were going to brand you. They had a brazier with branding irons stamped 'UEC', which they picked out and showed you. I can still recall how wet and slimy the bench felt, and I kept thinking "This can't be legal!" Then they held you down and said "Take

a deep breath,” and they slammed a block of ice against your buttocks at the same time as they pushed the branding iron into a piece of steak so that you could smell the burning flesh. It was the most realistic thing I’ve ever been through. I was never so frightened in my life.

The next year we were participating, and it got even worse. I think they had something like hard-boiled eggs, and one of the things they made you do was pick up the egg with your buttocks and crawl across a hall or something. All the senior engineers were watching and urging you on. I still remember Charlie Bubb, who was a great big fat bloke. He was so fat that he had no chance of holding anything in his buttocks. He got a great job later with the government.

Engineering school was great fun. Once you had been through the engineering rites it bound you together quite a lot.

Working in the university holidays, being the chainman

In 1944, I worked for Tomlinsons in their drafting office for whatever it was – eight to 10 weeks or so. They were probably the biggest engineering organisation in the state in those days. One year I worked for a surveyor from Albany, and we were surveying in the country between Moora and the coast, in all that sand plain country up there. He was a tough cookie. He used to carry his theodolite over his shoulder in one hand and his chain in the other, and I was his chainman and spikeman. So I carried a bag of steel spikes and a hammer and the chain, which would have been about 60 feet long.

He used to walk all day at 100 miles an hour. Gosh, he was fit. And I thought I was pretty fit at the time. We used to stop for lunch and you’d stop on this sand plain and, you know, there was nothing. No shade. And you would see a 100 metres away over there a bit of a tree or a shrub and think, gee, at least I can get some shade, so you would go over there to have your lunch. What you didn’t realise was that was where all the kangaroos used to sit too.

You’d finish up full of kangaroo ticks! Each night we used to stop and cook our dinner because we used to camp out. So you would strip down and go over each other inch by inch to find the ticks. And if you pull a tick out, you tend to leave its head behind and get a boil, so you had to have a hot needle, which you would stick up the back end of the tick so it would back out and you could grab it. Oh Jeez! We worked up there probably for a month or two, and then worked out of Albany for a month or two.

Jenny Finkelstein, Betty Balstrup and Bruce Rogers

After I started university I went out with Jenny Finkelstein, who was studying psychology for an arts degree. She introduced me to a whole new world. It was at the time when intelligence tests were all the rage, and so she gave me an intelligence test that showed I was fairly mediocre. Her fellow psychology students had difficulty finding people to test and so a number of her girlfriends also tested me. By the time I had done my fourth test I was super intelligent; I knew all the questions before they were asked and what all the right answers should be.

A year or two later when I met Judy McCubbing (she later married and became Judy Crooke), she gave me the same test and was terribly impressed by my results because I never mentioned to her that I’d done it before.

About my fourth year at university my friend from Scotch College, Bruce Rogers, who had been accepted at Duntroon and completed the three-year course there, came to university to study engineering as part of his army career. I had kept in touch with Betty Balstrup and on a few occasions went out with both her and Bruce. After a while she said, “I pity the poor girl who ends up with Bruce Rogers,” so I was surprised when I was at the University of California in Berkeley a couple of years later to get a letter to say they were engaged to be married. Bruce travelled the world with the Army. He was the army representative to the Australian Embassy in Washington for two or three years. They finished up in Adelaide with an almond orchard, and had seven kids, six boys and a girl. I visited them there on several occasions, but Bruce died fairly young, and Betty soon thereafter.

I used to play rugby with Bruce Rogers. I remember when a group of us were at a party with a lot of girls and we were using a glass as a ball. Anyway, Bruce threw me a pass and I missed it – and lost half my front tooth, which sobered me up very quickly.

Prosh

Every year students at the University of Western Australia produce a satirical newspaper called Prosh to raise money for charities and poke fun at current events and political agendas. I remember

I was advertising manager and Jenny Finkelstein used to come with me to raise money for the Prosh publication, which is how I got to know her.

One year, as part of a Prosh prank, we got together a group of students dressed in workmen’s uniforms and armed them with jackhammers and other tools. We went to Dalkeith and started surveying verges and people’s gardens in the suburb, saying we were surveying a new road. We scared the living daylights out of some of the residents. We went through Mrs Court’s garden and she rang her husband, later Sir Charles Court and the 21st Premier of Western Australia and he was irate.

Graduation in Mechanical Engineering

I completed three years of civil engineering at the University of Western Australia, and in my last year, 1947, I swapped to mechanical engineering and graduated with first class honours, primarily because I had a good lecturer called Bob Walker.



Harold at UWA



Judy and Harold, with cousin Peta Hayes

Wally Russell and Cooperative Bulk Handling

In 1948, I was in town one day and ran into a fellow called Wally Russell, who was a good friend of my mother's and Bill Hayes' and had a very successful farm in the Southwest, in Esperance. I remember when I was still at university I had stayed on his farm with his son Bob, who was my age and a real character. My mother always told me that Wally Russell had had a crush on her, but she had married my father instead.

I saw Wally Russell in Barrack Street just outside the Weld Club. He was President of the Weld Club and Chairman of Cooperative Bulk Handling (CBH), the grain handlers. He asked me what I was doing, and I said I'd just graduated so he suggested that I go and work for CBH, which I did.

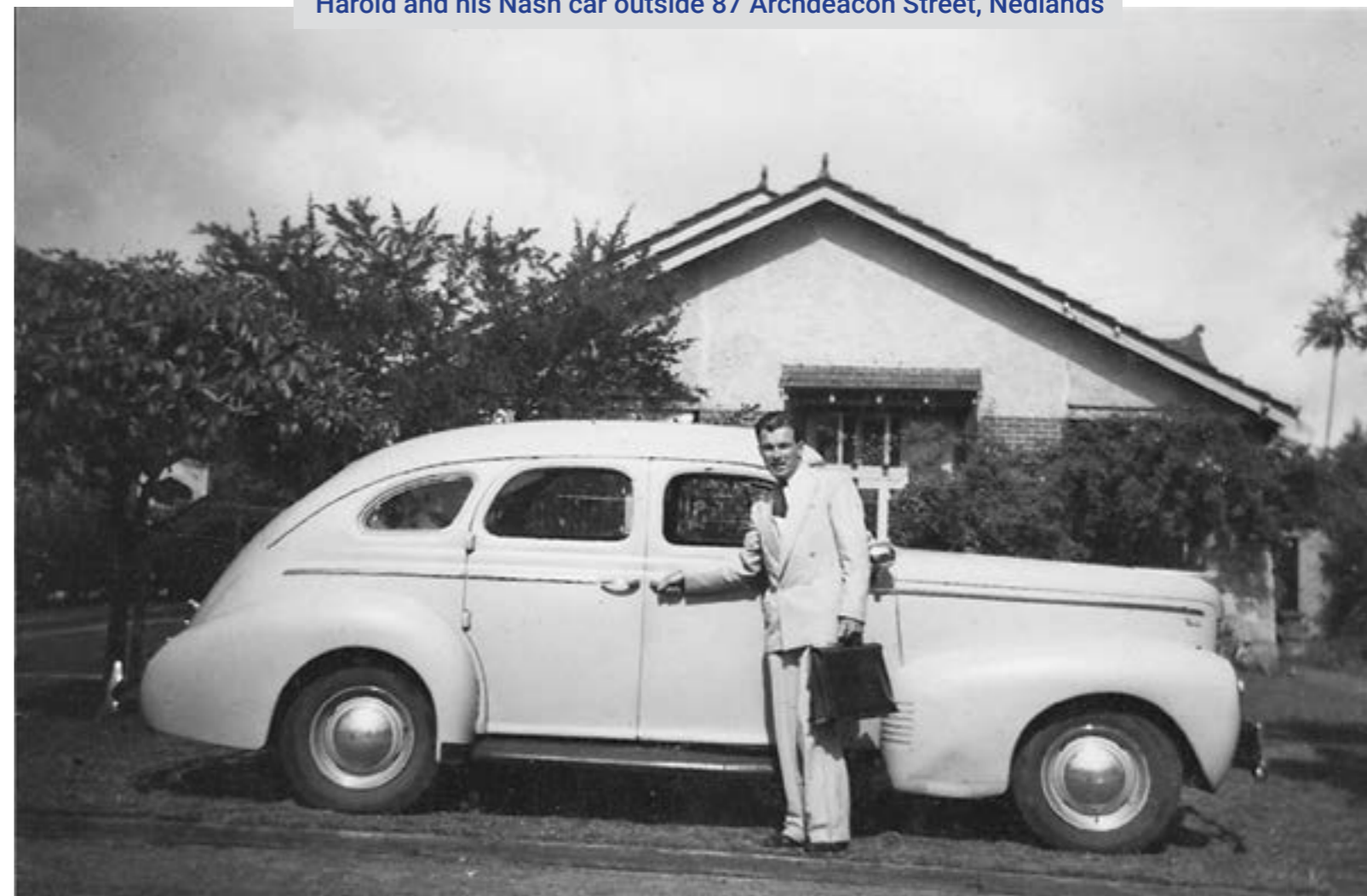
Nash car

The best thing about CBH was that it was associated with Wesfarmers who had the agency for Nash cars. My boss, Alan Stevenson, drove this big Nash, and after I'd been there about six to eight months he got a new car. As a special favour CBH let me buy Alan Stevenson's Nash car. Nobody had a car and I had this big Nash. It was 1948, three years after the War, and everything was rationed. Petrol was rationed; cars were rationed. You had to wait 18 months for a Holden.



1947, Harold and Judy Christmas shopping

Harold and his Nash car outside 87 Archdeacon Street, Nedlands



On the road with Peter Wright — Coolgardie, Kalgoorlie, Adelaide, Melbourne

I was with CBH in 1948 and 1949, and then I decided to drive to Sydney with Peter Wright, a great guy, an acquaintance who was looking for a ride across to the Eastern States.

This was quite an expedition in those days. There was only an unsealed road from a hundred or so kilometres out of Perth, connecting Western Australia with the rest of the country. You had to carry your own petrol, food and water for most of the thousand-kilometre crossing of the Nullabor Plain. I remember that the press often interviewed motorists when they arrived in Perth.

We worked as we went, to pay our way. We drove up to Coolgardie and got a job on the goldmine, and then went to Kalgoorlie where I got a job working underground at the North Kalgurli Goldmine. There were a lot of silicosis sufferers in and around the gold mines, their lungs infected by the dust. We had to breathe aluminum dust to protect our lungs.

I was an underground fitter. The first day there you lined up with your helmet and your light. We were working quite deep, 3,000 feet, I think. You went down on a skip driven by the winder that used to bring the ore up. About eight fellows would be in the wire cage, and the winder driver always knew when there was a new boy and he would drop the skip about $\frac{3}{4}$ of the way down and then stop it at the level, and you'd yo-yo up and down two to three feet.

I was repairing pumps and doing plumbing, but you were down at 3,000 feet for eight

to 10 hours a day. It was real rough, but I learnt a lot. There was a great shortage of labour at this time and it was not hard to get work. We did that for two months, then we took off and drove to Melbourne via Adelaide.

When we were driving across the Nullabor, the bitumen stopped before you got to Northam, and thereafter it was all gravel or dirt roads. Halfway between Kalgoorlie and Eucla, Peter was driving and we went down this hill where the road turned to the right, but he went straight on and we crashed into the dirt.

"You went to sleep," I accused Peter.

"No, the steering doesn't work," he responded.

The steering had an idle arm that would push both wheels together, and the pin had broken. We looked at this for a while, then got some fencing wire, wired it into position and continued on to Eucla. They didn't have the parts we needed, but they did have a bolt and we bolted it up.

We drove to Adelaide, a major achievement as we could turn left, but we couldn't turn right! We took the car into the Nash agency to get it repaired and picked up work in a car battery factory, and lived in a guesthouse in the Adelaide Hills. We stayed a month or two, until the parts arrived and the Nash was fixed, and we drove on to Melbourne.

Bob Walker and WD Scott Consulting and Method Time Measurement

When we arrived in Melbourne we caught up with Bob Walker, the lecturer who had convinced me to do mechanical engineering. He was working for a

consulting company called WD Scott and they had the agency for a technique called Method Time Measurement. Traditionally, when industrial companies were trying to improve efficiency, they would time operators and try to work out how to improve their efficiency, but the unions prohibited timing workers. So they introduced Method Time Measurement, which didn't involve a watch. WD Scott specialised in Method Time Measurement, and Bob persuaded me to join them. They sent me to a training school in Sydney for a month, and I stayed with my cousin Carol, and her kids there. My cousin Carol was a great girl, just like her father, my Uncle Bill.

Carol had met her husband, Tony Cowlshaw, an army man, when her father Bill, a returned serviceman, brought him home for dinner one evening. He went off to the War, and when he got back they married. They had three kids, Peta, Kay and Michael Cowlshaw. Michael married someone from the circus, an Ashton.

After training in Sydney, I went up to Maitland in the Hunter Valley, where Bradford Cotton Mills had an enormous factory that used to spin cotton from bales and then weave it to produce cloth. Bradford Cotton Mills could run a profitable business at that time because we had 100 per cent duty on all imports. I was as raw as could be, trying to teach these spinners and weavers how to work more efficiently, but we really could improve their times dramatically and we did.

I worked at the Bradford Cotton Mills as a consultant for WD Scott Consulting for three months, and then two things happened in mid-1951: I got advice that I'd won the Fulbright Scholarship that I'd applied for a year before to study at the

University of California in Berkeley, San Francisco. It had been advertised, and someone had suggested I apply for it. I got a great reference from Bob Walker. So I gave notice that I'd leave in a month's time.

About a week later, on 9 August 1951, I got a telegram that my mother died. I rang Scott's and asked to go home straight away, which they were more than understanding about.

Selling the Nash

I drove down to Sydney and caught up with Bruce Rogers, whom I had rowed with at Scotch. I had to sell my car. In Sydney in those days they had car auctions, and if you put your car in you had to sell it, and you had to drive it about 20 metres to show that it worked. The Nash was auctioned and I got what I considered a fair price, a few hundred pounds, and then I asked the fellow to settle up. "I'm going to the army camp on the North Shore," I told him, which was where I was staying with Bruce, and he offered to drive me there. I didn't tell him there was a trick to driving the Nash — it had four gears on the steering wheel, and normally you'd just slip from one to another, but it had a terrible system and sometimes missed a gear. You couldn't change gears easily and often you had to get out and change the gears manually under the bonnet. I knew he was going to find out sooner or later, and as he took me to the army camp I wondered whether I'd have to show him. The car behaved, and once I got inside I knew I was okay.

I stayed with Bruce for a night or two and then caught a plane back to Perth. There were four or five stops. They were all propeller planes then, and they flew at low altitude.

05

MOVING TO AMERICA



Fulbright Scholarship to Berkeley University and flying to America

After my mother's funeral, I went to California. In those days everyone travelled by sea. Flying was two or three times as expensive as ship travel, but Fulbright said they were flying me.

Today people fly to London with the same amount of thought that we used to drive to Rockingham.

I flew in a Super Constellation—tremendous planes. They used to run planes like they ran ships. It had an upstairs lounge and bar, and there were probably only 20 passengers. The downside was that it only had a range of about 1,000 miles, so it took several days to cross the Pacific with a number of refueling stops. We flew from Sydney to Fiji, Kanton Island, Honolulu and Los Angeles. On the flight I met Ron Lyons, a geologist, who had also been awarded a Fulbright Scholarship to Berkeley.

I arrived in California, a young, wide-eyed 25-year-old, who had never been outside Australia.

Uncle Arthur

I saw my Uncle Arthur, my mother's older brother, and one of the 11 Hayes kids, whilst in Los Angeles. Uncle Arthur had been an undertaker in Landsborough, then a carpenter, and then he went to America after the 1908 San Francisco earthquake because he thought there'd be lots of work. He went to Sydney to board a sailing ship to San Francisco and on the ship he met a white Russian immigrant who was disguised as a man so she could travel

steerage. He caught VD on the ship, and I've often pondered if this was why he could never have children.

Arthur went to Los Angeles, opened a woodworking shop and established a very profitable business that specialised in fitting out banks with wood finishings so they had an aura of opulence and wealth. He had a very good business, and when I got there in 1951 he was doing tremendously well. He had a beautiful house in Pasadena, a Cadillac, and he treated me like a king. I thought all my Christmases had come at once. The wealth of America after the austerity of Australia was simply amazing. When I left Perth in '51 we still had petrol rationing, everything was hard to buy, and everyone was poor, but America was just so rich. Wages in America were at least four times what they were in Australia. The difference in those days was really immense.

Arthur had married an American girl called Reba. They had no children, so I was made doubly welcome. After staying a week with them I caught a train from Los Angeles up to Berkeley, which was about an eight-hour trip. I was a little concerned that we might not arrive in Berkeley before dark, so during the journey I asked the black American conductor if the bus was running late. He said "Yes, there aren't many passengers today." This confused me, and I realised he thought I'd said, "Is the train running light?" My Australian accent was different to their American slang. I could understand them, but they couldn't understand me. At an appropriate time I asked him again, and he assured me the train was on time.

Berkeley University, California – ‘Bill’ versus ‘Hal’

We arrived in Berkeley on time and, still in daylight, I caught a bus to International House and fronted up at reception and told them who I was. “Are you William Harold Clough?” they asked, and I said “Yes.” They asked “Can we call you Bill?” I was too shy to say “Well you can, but everyone calls me Hal.” What I hadn’t realised was that no one I was meeting in Berkeley knew I was called Hal, and very quickly everyone called me Bill and I realised I preferred Bill to Hal.

When I came back to Perth four years later, everyone called me Hal and no matter how many times I told them I’d changed my name to Bill I still always got called Hal in Perth.

Fortunately my wife, who’s always known me as Bill, still calls me Bill and I’m able to distinguish her friends because they all call me Bill too, and I answer to both.

International House

Ron Lyons and I fitted into the American system more easily than most foreign students. We stayed at International House on the Berkeley campus – 500 students, half Americans, half foreigners, half women and half men. I was young and single and thought all my Christmases had come at once.

There were 51 different nationalities living in International House. In Perth in the ‘50s you hardly ever met anyone foreign, so it was a great eye opener.

Each mealtime we used to eat buffet-style, where you collected what you wanted on a tray and sat down at a community table.

Ron and I would collect our trays and then discuss whom we would sit with and stir up. Particularly in the first week or two, the foreign groups used to sit together, so there’d be a French table, a Japanese table, an Iranian table, all speaking in their own tongue, and Ron and I would sit in the midst of them. It was amazing how quickly they all changed to English so that we could fit in. The Middle East oil crisis was on at the time, and we would stir the Iranians up about the confiscation of the Commonwealth Oil Refinery in Aden, and how we believed it was completely illegal and should be given back. That certainly aroused a vigorous debate.

I think coming from Australia we fitted into California better than any of the other foreigners. The climate was the same and the food was the same, and we could understand the Americans even if they couldn’t understand us. Ron and I set about enjoying ourselves with great gusto and quickly got the reputation of holding the best parties on campus.

At UWA if you wanted something you might be given £1, or if you were very lucky £5. But the Americans would say “Are you sure \$2,000 will be enough? Do you want more?” I just couldn’t comprehend it.

Nearly 60 years later, in 2010 my granddaughter, Clementine Packer, was awarded an exchange to study at Berkeley University and she too stayed at International House and had the time of her life.

Meeting Norman McRae

Before I left Perth, my Uncle Bill Hayes who lived next door to us and was a second father to me, said he was friendly with a fellow named Norman McRae who

was the Press Attaché in the Australian Consul General’s Office in San Francisco, and gave me a letter of introduction. So Ron and I went into San Francisco to the Embassy and met Norman, who promptly invited us home to dinner in Berkeley that evening. The McRaes were living at 1620 Leroy Avenue, Berkeley.

Meeting Marg

What Norman hadn’t told us was that he had two daughters, Marg and Dorothy, living with him, who were about the same age as we were. We had a tremendous night and organised a party at their place later in the week. When Ron and I were walking home we debated who would have which of the two girls. I opted for Marg and Ron opted for Dorothy, and that’s the way we got together.

There is no doubt how pretty Marg was when she was young. She has amazing charm that is completely natural. That’s why it’s so potent: she doesn’t know she’s doing it. I wondered what I’d struck.



1951 Harold and Marg not long after they met in Berkeley, San Francisco



Marg. “There was no doubt that Marg was very pretty but it was how she acted that was really a knockout. I wondered what I’d struck!”



Marg on their first trip to Reno about 1951

Hans Alpanalp - tennis and skiing

California is a magnificent state and Berkeley is in a most magnificent location. It's only about 15 minutes from the Pacific Beach and two hours from the High Sierra Mountains where the scenery is majestic, and in winter the skiing is a delight. I had bought an Oldsmobile car, a standard just below a Cadillac. It was a great car and served me almost without fault for four years. On weekends in summer my best mate, a Swiss called Hans Alpanalp, and I would play tennis and I would always beat him easily. In winter we would all pile into the car and drive two hours up to Lake Tahoe in the mountains, book a room, and

the six of us would all bunk in together and spend the days skiing. I insisted that Hans stay with me and teach me how to ski. He of course was a star. Lake Tahoe is probably one of the most breathtaking sites in America together with Yosemite National Park.



Hans Alpanalp and Harold



Harold and mate,
Long Beach, California



Harold and friends at 1034 Keith Avenue,
Berkeley, California, Hans Alpanalp on right



Margaret and Harold revisiting
1034 Keith Avenue, Berkeley,
California

I also went up to Lake Tahoe and Yosemite in summer with Marg, and we would then go on to Reno in Utah. I have an interesting

photo of Reno when Harold's Bar was a single storey building in 1952-3. Those were great days.



1.
 Marg. outside a
 Norwegian Restaurant
 near Auburn on
 Highway 40 to Reno
 19 April 52
 You can see my skis
 on top of the car.



4.
 Half way up the
 Sierras on Highway
 40. Marg about to
 take a movie of m
 she hated these phot
 & so don't mention I
 sent them home.
 19 April 52



2.
 I did not have
 mumps at this
 stage. and don't
 think I am getting
 as fat as this
 seems to indicate.
 19 April 52



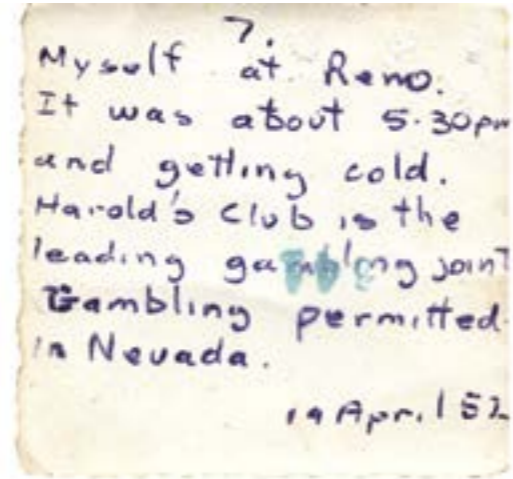
5.
 same place. He
 taking a movie of
 Marg. Have my ski
 goggles on. It was a
 glorious day. Blue
 sky warm & sunny.
 19 April 52



3.
 Showing some more
 of the car. Notice
 I have bought a
 rack to carry the
 skis on top. Have
 also bought myself
 some skis, boots
 & poles. - sometime
 same place



6.
 Marg. at Reno.
 This is the convent-
 ional shot looking
 down the main street
 It is quite a small
 place. Not much bigger
 than Banbury.
 19 April 52



Exams

I was attending lectures, but not really doing any study. I was having a great time and didn't want study to interfere with it. I realised there is a wonderful thing about a degree: they can't take it away from you. If you fail your exams before your first degree you have nothing, but no one really cared whether you had a Master's degree or a doctorate degree as a postgraduate qualification unless you wanted to be an academic.

The university year was divided into two semesters with final exams at the end of each semester. So when I'd been there some four months I had final exams coming up in a few weeks time and realised I'd done no real studying since I arrived. I also became aware that unless I maintained a 3.5 grade average, which was a pretty high standard, I would have to pay the university fees that were otherwise waived for scholarship holders. This meant some \$3-4,000 dollars of real money that I did not have and so, overnight, passing well became very important. It was made more difficult as I had no idea how the American examination system would compare with

the Australian system. For the last few weeks I put my head down and burnt the midnight oil. I ended up getting much better marks than I had in Australia which, given the amount of work I had done, I considered an indictment of the American education system.

Holt Scholarship

On the basis of my results I was awarded a Holt doctoral scholarship, which provided funding for a further three years study to do a PhD and was a quite prestigious award. I debated the issue long and hard, but finally decided that life was too short and I had too many other things I wanted to do. I decided not to spend two to three years doing a doctoral degree. In 1990 I was awarded an honorary doctorate by the University of Western Australia. It certainly beat studying for one!

I decided to try to get a job with an American construction group with the thought of coming back to Perth and joining my father's building company. I'd always wanted to go into business for myself, but was very aware how hard it was to earn enough money just to pay

the rent. An established business like my father's, no matter how small, was a big advantage.

Bechtel Corporation 1953

After graduating, I secured a job with Bechtel Corporation, one of the biggest engineering companies in the United States, and worked in their head office in San Francisco. As a young engineer I was gung-ho. I wanted to get out on the site and build things, but Bechtel had a completely different idea. They put me in their estimating department, where I sat at a desk all day estimating the costs of projects all over the world for which they were tendering. It was laborious, boring work, but with hindsight it was the best training I could have ever had because Bechtel had great systems, and knowing your costs is the single most important thing as a contractor or for that matter in any other business. Don't believe anyone when they say they can estimate accurately. It's just not possible.

After a year of estimating I was sent down to a new site at Wilmington, just outside Los Angeles, where Bechtel was building a big oil refinery for Shell. I was the cost engineer, which meant I had to keep track of all the costs. That was a job I thoroughly enjoyed and where I had to report the cost of many items that had never been measured before. It's relatively easy to keep the costs of the amount of money you are spending, but harder to measure the amount of work that is represented by that cost.

Phoning Marg

While I was working in Wilmington, California, Marg moved from San

Francisco to work in New York. There was no direct dialing in those days. To make a long distance telephone call to New York you had to ring the operator, book the call, and she then instructed you to stand by for an hour or two until she had the chance to put it through. You could then talk for three minutes after which you got "beep beep beep" which meant your three minutes were up. A three-minute call cost me half a day's wages. So when I rang your mother we'd talk for three minutes and it would go "beep beep beep" and I'd say, "Well, goodbye, darling" and she'd say "Don't you love me anymore?" and there would go another half-day's wages while I convinced her that I did.

To New York to visit Marg

I decided to leave Bechtel Corporation in 1953 and drive to New York in my Oldsmobile to see Marg. When I told her mother and father, my future in-laws, they asked if they could come too. I of course said yes, but didn't know what I was letting myself in for. Her father didn't like the way I drove, so he drove most of the way and I thought he drove 10 times worse than I ever did. So it was a somewhat difficult week, but it had one bonus. Each night we'd find accommodation where they could stay, but I wasn't prepared to spend money on a hotel so I slept in the back of the car. It meant that when I picked them up the next morning I was able to have a shower, and that probably made it worthwhile.

Marg and I spent a bit of time in America and then travelled to England where Marg's sister Dorothy was living. We married on 27 October 1953 and Sue was born a year later.

06

BACK IN AUSTRALIA

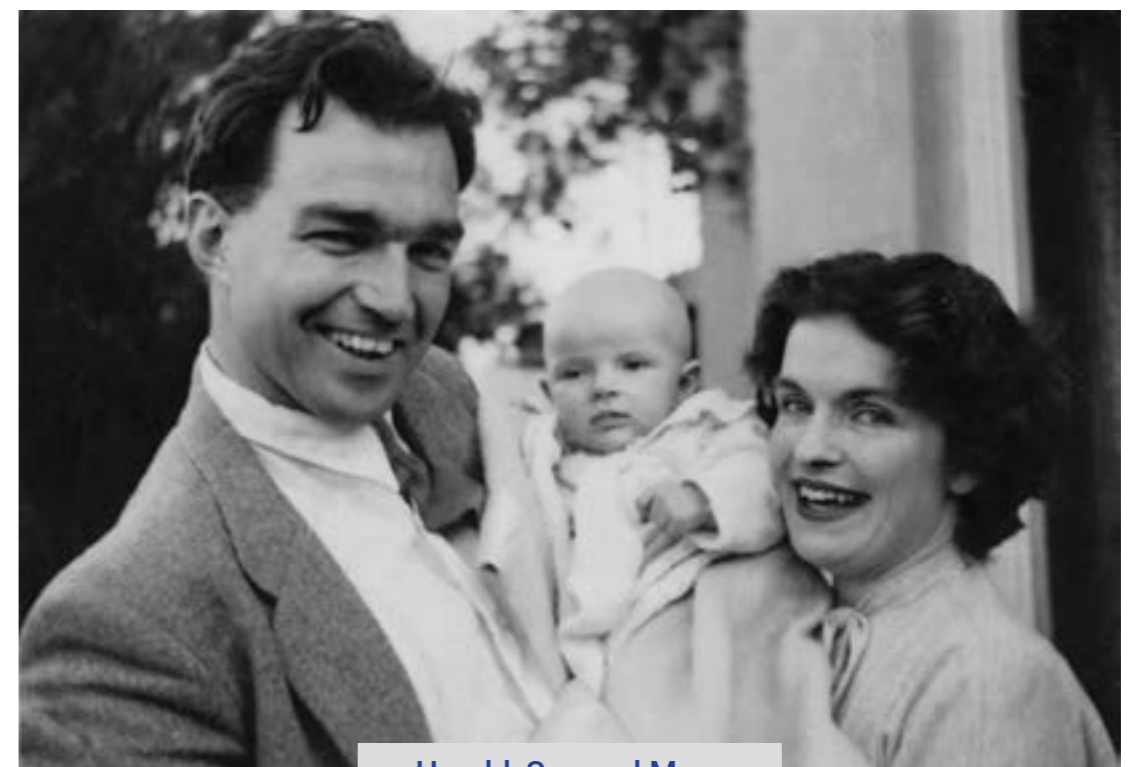


We didn't have any money when we got back to Australia, and rented houses at Kalamunda and Gooseberry Hill. When my sister Judy married Les Hollier on 22 April 1955. They were living at 85 Archdeacon Street with my father and, when they took

off on a 12-month or more honeymoon to the Eastern States, Marg and I moved in because my father was living alone. Jock was born on 8 October 1955, while we were living in Archdeacon Street.



John Clough with just married daughter Judy and husband, Lesley Hollier



Harold, Sue and Marg

We lived with my father until Judy and Les came back in 1957, and then we moved to Marg's family home at 93 Stanley Street, Nedlands, just four streets from where I

had grown up in Archdeacon Street, and which was owned by 'Marg's' parents, Norman and Vie, who were still living in San Francisco.



Harold and baby Sue



Sue and Harold



Harold and Marg

I came to an arrangement with Norm and Vie that we'd buy the place over a period of 10 years. When we moved in, it was unfurnished so we had to accumulate furniture. Your mother had a lot of clothes from the US. In those days the US was significantly ahead of Australia in everything, but particularly in things like clothes. I remember I got a piece of water pipe about eight feet long, a bit like a scaffold tube, and three pickets, and made a tripod and fixed the pipe to the top so she had a clothes rack. It worked well, and for her birthday I got her some proper furniture — not a very inspiring birthday present, but Marg appreciated it. I bought beds with cupboards at the back and room for shoes at the front, and had wardrobes made wider than the normal coat hanger width so that you could hang your clothes square on, which appealed to me.

Working with Clough Brothers

In 1919, after returning from the War, my father together with his brother Bill had established the building firm, Clough Brothers. Up until WWII, my father was a cottage builder, building only houses, but after the War there were opportunities to build small factories and office buildings and shops.

When I returned from America I started working for my father. It was not a big business. We had one employee, a chap called Doug Atwell. I made two, and our office was a room at Archdeacon Street. My father used to do the estimating and organise contracts, mainly building service stations for BP. Bill Hayes, my uncle, used to keep the books and I worked for a wage. My father immediately set me to work as a builder's labourer. I remember our first conversation about this, if you

could call it a conversation. On one of the first mornings after I started working, my father said "Right, there's a concrete mixer and there's a shovel, so shovel stuff from here to there."

I'd come back all fired up, thinking I was a bright engineer from America going to set the world on fire. We fought like cat and dog. But it was great training. I was a builder's labourer for 18 months. You learn a lot shoveling sand and aggregate and cement. You learn a lot about concrete if you work on a concrete mixer.

Fighting like cats and dogs!

We worked on various projects, and I thought that we were doing pretty well. At the end of the first year I had a look at the accounts that Bill Hayes had prepared and we hadn't made a cent. I thought "Jeez, that's funny. I'm sure we did better than that."

I gradually started taking an interest in what was happening with the accounts and so on. Of course, my father was robbing the firm blind. But because he was smart, he did it very professionally. I went to see my uncle and he said "Oh no, everything is completely legit. I keep all the accounts and I write all the cheques and everything balances and checks and cross balances; everything's perfect." And it was.

My father was meticulous, and mathematically very smart. He was so smart he could fool Bill anytime.

We had a number of subcontractors, painters, plasterers, plumbers and so on. Some of them you could pay by cheque, but some of them insisted on being paid cash because they weren't paying any

tax. My father knew that contractors who weren't paying tax didn't keep books. So if they wanted £500 for painting, he'd write out an invoice for £1,000 pounds, which he'd give to Bill who'd give him £1,000 and he'd give them £500 and put £500 in his own pocket. He would keep his books immaculately. They didn't have any accounts at all, and he knew damn well if anybody ever checked they wouldn't have a chance because his accounts were perfect and theirs were non-existent.

My father would gamble this money with the Starting Price Bookmakers, who were the illegal takers of betting on horses before the government established the TAB.

Marg tells the story that after a year or two we were a bit fed up because conditions in Australia weren't half as good as they were in America, and we weren't making any money and we didn't have anything. My father and I used to fight like cat and dog, particularly when I realised that he was cheating. Marg and I were talking about it one night and one of us said "Let's go back to California." Not that it was all that easy, but we thought one way or another we could do it.

I was telling her a story about when we were growing up and my mother had this secret hiding place. And she said "Where is it?" I said "Well, you go into the passage leading into the bathroom and there's a cupboard there on the side. Open up the cupboard and you go down to the bottom shelf and there are some boards there. One of them has got a nick in it and you lift that nick up and underneath there's a compartment." She said "Oh, that sounds interesting." So, she went to have a look and came back carrying a stash of money. "Look what

I found!" she said, and threw the money around jubilantly. He'd stashed the money away to bet with the SP Bookmakers.

It was quite apparent that we were never going to make a profit while this system prevailed. When I confronted my father and accused him of stealing, he was completely unapologetic and said it was his company and he could do as he liked and if I didn't like it – tough luck! I thought "It's all right for you, but I've got a wife and a young kid. What am I going to do?"

However at that time my father decided that he wanted to tender for the National Mutual Building, and against all the odds we won the contract, which meant that I was committed to staying in Perth.

National Mutual Building

At the end of 1955, the National Mutual Life Association decided to build a new Head Office for Western Australia at 81 St George's Terrace. It was to be a 12-storey building, the highest in Perth at that time, the first high-rise to be built since the beginning of the War, and easily the biggest building project in Perth.

The new National Mutual Building was valued at half a million pounds, and the biggest contract we'd previously had was a £25,000 service station, so it was well outside our class. However, the architects were Hobbs, Winning and Leighton and the senior partner was Athol Hobbs who had been in the Army with my father.

At the commencement of World War II in 1939, Athol Hobbs was Commanding Officer of the 3rd Field Regiment with a rank of Lieutenant Colonel and my father was his 2IC with a rank of Major. Since

my father had been in WWI and spent four years in first Gallipoli and then France, he was much more experienced than Athol, who relied on him a lot. Drawing on that relationship, my father persuaded the architects to include the name of Clough Brothers on the bid list with about 10 others. The father, son and one or two tradesmen who made up Clough Brothers had no chance of winning a contract which was probably 20 times the value of any job they had undertaken until then. I imagine Athol thought something like "The old fellow certainly doesn't deserve to be there, but with 10 other bidders the chances of his winning are remote and it'll keep him off my back."

Tenders closed at midday on a Monday and so my father and I worked the whole weekend completing our tender. On Sunday night several relatives dined with us. My father declared that he'd very much like to win and that we should take £20,000 off the price. I protested that that was all our profit and made the tender far too risky, and persuaded him to delay a decision till the next morning when we'd had a chance to sleep on it.

Next morning my job was to fill in the Bill of Quantities, which was a 100-page document with the detailed cost of everything involved, a painstaking task. At that time we had no office and worked in a room on our back verandah. At about 9 o'clock my father was leaving and called in to see how I was going. I asked him if he still wanted to take £20,000 off. He said no, that he'd changed his mind. He wanted to add £10,000 on. I said, "You can't do that, take £20,000 off last night and add £10,000 on this morning. It's not a way to prepare a tender." He replied "Make up your own mind" and took off.

I completed the Bill of Quantities down to the last line, where I could make an adjustment either way. I remember thinking, "God, what the hell am I going to do?" Then I did the smartest thing I've done in my career. I went and asked my wife what I should do. Having no idea whatsoever what it was all about but, as the Scots say, she's very fey, she said add £5,000 on. So that's what I did.

The tenders were placed in a box, which closed at 12 precisely, then publicly opened with all the tenderers present. With large tenders there is a lot of tension and the crusty old builders all rib each other while they wait for the box to be opened. Being the youngest, I had previously been the butt of this banter so decided I would arrive at a minute to 12 so as not to be subject to much of it. Consequently, I walked up and down the Terrace for 20 minutes and at the last moment went into Hobbs, Winning and Leighton's office and placed our tender in the box. I didn't have a chance to tell my father what I'd done. At precisely midday, in front of everybody, Athol Hobbs opened the box, removed the tenders, and started opening them and reading out the tender prices.

The second tender price to be read out was from Sandwell & Co, who were the favourites and had a price which was £2,000 higher than ours, but £3,000 less than the price my father had suggested. The next six prices were all higher. Our price of £488,000 was the second last to be read out and was £2,000 lower than the lowest tender price so far. The last price read out was also higher, and so we were the lowest price by £2,000. My father couldn't believe it. "You bloody beauty" he said and went out and got drunk.

We then had the difficulty of persuading National Mutual that we had the capacity to deliver their building. My father wasn't so worried. Once again he used his influence on Athol Hobbs, and after a lot of negotiation National Mutual agreed to award us the contract, but only on the condition that I worked full-time on it, which I did. As a result, the ambitions Marg and I had of returning to live in America became history. I agreed to stay on the proviso that I controlled the cheque book, and once my father agreed to that he could no longer gamble with the company's money and we got on much better. We also incorporated. Clough Brothers was renamed J.O. Clough & Son and, 30 years later in 1984, became Clough Engineering Limited.

National Mutual Building was Perth's first high-rise and was successfully constructed at 81 St Georges Terrace.

Albert Scott and the team

At this time we were living in Stanley Street and working on the back verandah of Archdeacon Street and after winning the National Mutual tender, we also had an office at the building site.

As I've mentioned, when I joined my father he only had one full-time employee, Dudley Atwell, who stayed with us for 20 years. Dudley understood my father, his larger-than-life character, energy, vigour, bluntness, and also his heavy drinking. Everybody else we employed was on a casual basis, but when we started the National Mutual Building we probably had 100 people working with us, and because it was the biggest project in town at the time it attracted a lot of good people.

The National Mutual Building under construction in the mid-1950s.



My father employed a bricklayer called Bill Sewell as building foreman. I remember a fellow called Bill Remaro came to the office and asked for a job and I told him to see Bill Sewell. I remember going out of the office that was over the footpath and up a single flight of steps. I had a look around at the steel frame and the steel fabricators, which had just topped out so it was 12 storeys high. We were just in the process of setting up the lift shaft.

Multistorey buildings don't have to be exactly vertical, but their lift shafts have to be. We found it quite hard to get it perfectly vertical. The lift shaft extended up the whole building, which moved in the wind. So we put a beam across the lift at the very top of the building and had a piano wire running to the bottom with four or five bricks tied to the end to act as a weight. Bill Sewell was up at the top, and Bill Remaro was a big fat Italian with a fat face and fat body. I said "There he is. He's up there." Bill Remaro walked over to a column and literally climbed up 12 floors. He really impressed me. I wouldn't have done it for \$1 million. He got the job and stayed with us all his life and his son joined us too. Great guy.

We were only halfway through the National Mutual Building when we won the Narrows Bridge contract, and we got very much bigger at that stage. I had promised Athol Hobbs that I'd work on the National Mutual Building, but when we won the Narrows Bridge, Christiani & Nielson made me Deputy Project Manager under Lief Ott Nielson and so I had to go and work there. We hired Bob Walker, my lecturer at university, to manage the National Mutual Building. He was an industrial engineer and had spent his life in manufacturing, but by the time I left the framework of the building

was finished and we were just doing the internal fit out, which is time-consuming and detailed work, but doesn't have the same risk as the skeleton construction.

Bob Walker hired a young graduate engineer, Albert Scott, which was great because while we were working on the Narrows we won the contract for the footbridges over the Kwinana Freeway in 1959/60 as well as the Muja Power Station in Collie in 1962.

Ted Abbot and Laurie Herbert also joined us about that time, and Don Young started not long after Albert Scott.

Albert Scott, who worked at Clough's for many years, worked with Jack Clough when he was a young engineer and recalls:

'He [Jack] was probably the best mathematician I have ever seen. He could add up a bill of quantities faster than most modern computers could do it. He was highly intelligent and taught me a great deal about estimating, which is a key part of running an organisation like Clough.'

'He would ask me to come to his home in Nedlands at 3.30 or 4 in the morning because that was when he was at his best. We would go through bills of quantities for bidding on more multi-storey work, after winning the National Mutual. He kept much of the knowledge in his head. I had a slide rule and primitive calculator we used then, but I found it hard to keep up with him. We would finish at about 7.30am and then go out and do a day's work on the site.'

'He used to love bending the elbow, especially Scotch.'

The Narrows Bridge

Late in 1956 the Government of Western Australia decided that the time had come to build a bridge across the Swan River at the Narrows, the narrow strait near the city centre. It would link the southern suburbs with the northern shore of the Swan River. The Main Roads Department, a division of the State Public Works Department, which had always built all the bridges in Western Australia, said they would like to build another bridge like the causeway that had recently been completed. The Government in their wisdom wanted a more elegant structure across such a pristine site, and suggested that the Main Roads Department consult an English engineering design company to design such a bridge.

The Main Roads Department consulted Maunsell & Partners from London, who were leading international bridge designers. Maunsell's suggested a pre-cast, post-tension, state-of-the-art concrete bridge, which the Government enthusiastically supported. Maunsell's then also persuaded the Government that rather than have the Main Roads Department build it on a cost-plus system using their normal day labour, they go to the worldwide market for an engineering contractor who had built similar bridges. That was quite a landmark in Western Australian history, because prior to that all bridges, ports, power stations and roads, in fact all engineering work, had been carried out by the State Public Works, Main Roads Department.

Joint venture with Christiani & Nielson

As I had worked in California with Bechtel Corporation for a couple of years tendering on large works all over the world, I was very conscious of how little international contractors knew about costs and conditions when going to an unfamiliar overseas location. One of the conditions for tenderers on the Narrows Bridge was that the contractor had to have built bridges of similar magnitude before, and that really eliminated all Australian companies as all the bridges in Australia had been designed and built by government departments.

Our company certainly would not qualify, so to overcome this problem I wrote to half a dozen international bridge builders suggesting we jointly tender on the Narrows Bridge. I didn't know any international bridge builders, but I got a copy of the Civil Engineers U.K. publication on bridges where half a dozen or so major bridge builders in the U.K. and Europe were listed and I wrote to all of them. I had two positive responses, one from Christiani & Nielson, a Danish company based in Copenhagen, which had particular expertise in bridges and concrete works.

We tend to forget today, but I remember we had to send telegrams to these people and when I wanted to talk to one of them I had to book the call with what was then the Postmaster General's Department. A day and a half later the call would come through. Making an international call in the '50s was a major, a really major, exercise and astronomically expensive. In today's terms, it would have probably cost at least \$1,000, and then you'd get a crackly, difficult line. Today we call London as if we're calling home and think nothing of it.

T K Sorenson

Christiani & Nielson sent engineers to Perth and we jointly tendered for the bridge. I well remember that when T K Sorensen arrived from Copenhagen to sign our joint venture agreement and prepare a tender for the Narrows Bridge early in 1957 we did not even have an office, so we hired a room from Bill Hayes who had an office at 133 St George's Terrace so Sorensen had somewhere to sit.

Sorensen and I worked together on the estimate and I was able to supply him with local costs and requirements. I was greatly impressed when, on about the third day, he came in and announced that the construction method suggested by the English consultants, Maunsell & Partners, was all nonsense. We would not build the pre-cast, post-tension beams onshore and pick them up with a large floating barge and crane to place them on the prepared piers, but would build a timber pile bridge across the river with timber trestles and place the pre-cast concrete elements in their final position for post tensioning. Overnight he had conceived the change, had sketches of the pile structure and trestles and the two gantry cranes that would straddle the bridge, and the casting yard to handle the elements. He was suitably influenced by the low cost and high strength of the local timber.

Sorensen's thinking was both lateral and courageous, because in those days the engineering consultants were regarded as the final arbiters on matters of design, and the challenge from Christiani & Nielson was not warmly received. Maunsell & Partners of London were famous, and like all consultants they thought they were a bit above God and never expected their plans would be challenged.

Sorensen was very smart, very knowledgeable, very experienced and very confident of his own ability. I learnt a lot from him. The only win I had was when we came to look at the abutments. Part of the south abutments were going to be under water and the foundations were beneath the water table. We had the problem of dewatering it. We were still building the National Mutual, whose foundations were also in water, so we'd had to employ a spear system of pumping and dewatering their foundations—quite a new technique. Therefore, when we came across this problem I knew exactly what to do and he didn't. That gave me great heart. I decided that even these smart fellows didn't know everything about everything.

Sorensen came to dinner at home and met my father, and they got along surprisingly well. I well remember that night because Jock, who was about a year old, managed to poo on the dining room carpet right in front of where Sorensen was sitting, a situation he found hard to handle. Sorensen often recalls that there were children crawling around on the floor as the momentous tender document was prepared.

We worked for several weeks to put this tender together. Our bid price was £1.325 million (\$2.8 million on completion date), at least £100,000 lower than the nearest competitor. This was in 1957.

Of course it was the biggest thing that had happened in Perth since the War and it got all sorts of publicity. I don't know how many bidders there were, but Harold Doust, a local builder, had tied up with Hornibrook of Queensland, the only Australian company that had built a bridge of similar size. He'd built the Hornibrook Bridge across the Brisbane River during the War. Harold



Harold and John Clough, as appeared on the front page of *The West Australian* newspaper

Doust was convinced that he was going to win because he was associated with the only Australian company that could be prequalified. There were several foreign bidders, but none of them had Australian associates. We put in a very competitive bid and had long negotiations with the Main Roads Department, the client, and Maunsell's, the consultants.

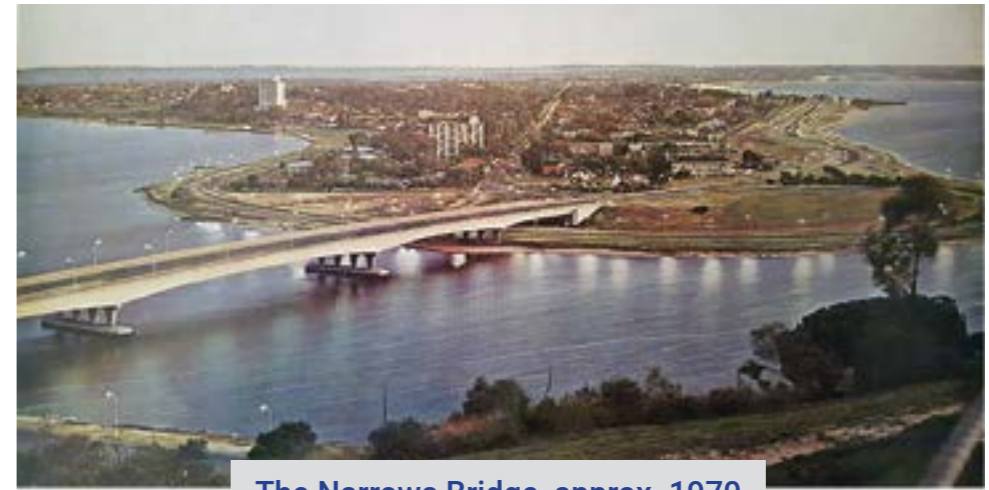
Sorenson was formidable in negotiations because he was one of those fellows who just brimmed with confidence and the English consultants were very proper. You know how they try to put you down. They tried desperately to put him in his place, and he took absolutely no notice of them whatsoever. We had weeks of

negotiations, and a week or two before it was announced we were quite confident. We'd pretty much been told we were going to win.

Marg's uncle by marriage was a bloke called Issy Walter, who was quite a mate of Harold Doust's. I remember we were seeing him and he was aware of course we were bidding, and he said "What's happening on the Narrows?" I said "I can't tell you. We've been in talking to the client." He said "If Harold Doust doesn't get it he's going to be heartbroken because he's set his heart on this. You must give me some indication." I said, "Tell him to be careful of his heart, because I feel very confident."



Lief Ott Nielson and Harold



The Narrows Bridge, approx. 1970



Reclamation and construction works at 'the narrows'

Sorenson went back to Copenhagen after the negotiations, and when the winner bidder was announced we got a tremendous amount of publicity. We had photographers turn up at our home wanting to interview me. There was a great photograph of my father and me on the front page of The West Australian. The bridge really was the centre of attention in Perth during its construction. I remember it was the time when Rigby the cartoonist was at the Daily News, and he used to delight in having cartoons of the Narrows Bridge.

After we were awarded the contract we started work on the site, actually before the contingent of Danes from Christiani & Nielson arrived. We suggested, and Christiani & Nielson agreed, that we commence the site buildings so that when they arrived there would be somewhere for them to sit.

Christiani & Nielson sent out a bloke called Leif Ott Nielson. He was probably 45 or something and I was 30-31. He and I never got on. He was a brilliant engineer, but he certainly had difficulty in relating to people and cultures. He always referred to all of us by our surnames and called me Clough. Bent Schou, who was also from Denmark, almost immediately understood

that in Australia, where everyone uses first names, this was somewhat demeaning and so started calling me Clough also. I responded by calling him Schou. So, while everyone else used first names and we used first names with everyone else in front of Nielsen, he never caught on that Schou and I were making fun of him, and we have always referred to each other as Schou and Clough ever since.

When Schou arrived he sat down with my father who kept impeccable accounting records. Bent was the 'bog holder', or bookkeeper in Danish. This was in the days before adding machines and you did everything in your head. The books were all written up by hand — there were no typewriters let alone computers.

My father was a brilliant mathematician. He wasn't a trained mathematician, he just had a math brain and absorbed math very quickly. He used to read all my mathematics books as I went through university for interest. He was particularly fond of probability. He'd always been a gambler on horses and anything else, and he suddenly found it was a science: you could work out the odds, and that really fascinated him. He understood probability much more thoroughly than I did by the time I finished.

Bent Schou became one of my best friends. He was quirky and slightly rude, and always different and always unique. He was not just very clever, but smart too! Bent, warped and twisted – the last two adjectives were an inside joke, which we both enjoyed. His wife, Pia, was one of Marg's best friends. Pia was beautiful with very high cheekbones, and Marg used to say she looked just like Ingrid Bergman. They had a daughter, Annette, and a son, Bertil. I remember Bent was so proud when he had a son, but that was the end for Pia for she never recovered from the crippling arthritis that her pregnancy brought on. Bent Schou died on 23 September 2011.

I worked on the Narrows Bridge as Assistant Project Manager. It was exciting – a big event in Perth in 1957 as the only other bridge was the Causeway, which had constant traffic jams. It was the first time we had been involved in engineering construction as distinct from building construction, and it was also the first time a private company had built a major infrastructure project in Australia.

The Narrows gave our people a lot of confidence in their capability, and it gave us a reputation and track record of being able to build engineering structures as well as building structures. In the space of three or four years, we'd gone from building relatively small factories for £25,000 to building a high-rise building and the Narrows for £1.5 million pounds!

I guess we had two lucky breaks. We had a lucky break with National Mutual because of my father's relationship with the architect, and we had a lucky break at the Narrows because we picked a good partner. We were successful.

The success of the Christiani & Nielsen joint venture was certainly a turning point in the growth of J. O. Clough & Son and, I guess, in many ways all our lives.

Death of my father

My father died just before the Narrows Bridge was completed, which was disappointing, but he certainly got a great charge out of winning the tender, largely because of beating Harold Doust. I think he left on a high note.

We got on much better in his last two or three years. He realised he was a bit out of his depth, but he used to come and have a look. Of course what he was doing was also great for all his drinking mates. He died on 11 October 1959 at the age of 72 after a stroke and a relatively short illness.

I received a lot of letters of condolence from his old army mates. One in particular I remember was from Dick Fordham. He reminded me of how my father used to delight in ordering calibration shoots where the guns had to be calibrated, and this used to require a lot of accurate surveying and calculation, which really used to test the mettle of his officers. Dick concluded his letter by saying he would always remember my father, "when the lightning flashes and the thunder rolls and booms we can all rest content knowing old Cloughy is up there calibrating the guns of Valhalla." I love that!

On 23 May 1995 a ceremony was held at Hobbs Artillery Park for the official naming of the JO Clough Ordnance Collection, in recognition of 'this outstanding gunner who inspired, and was respected, by all who had the privilege of serving with him. Specifically, the Royal Australian Artillery

Historical Society of Western Australia wrote my father, as follows:

"Whilst the names of 'Hobbs' and 'Bessell-Browne' have been synonymous with artillery in Western Australia, the Society has frequently discussed the need to appropriately recognise the considerable contribution your Father, Colonel J.O. Clough, made to the Royal Regiment of Australian Artillery during the two world wars and the years between."

Opening of the Narrows Bridge

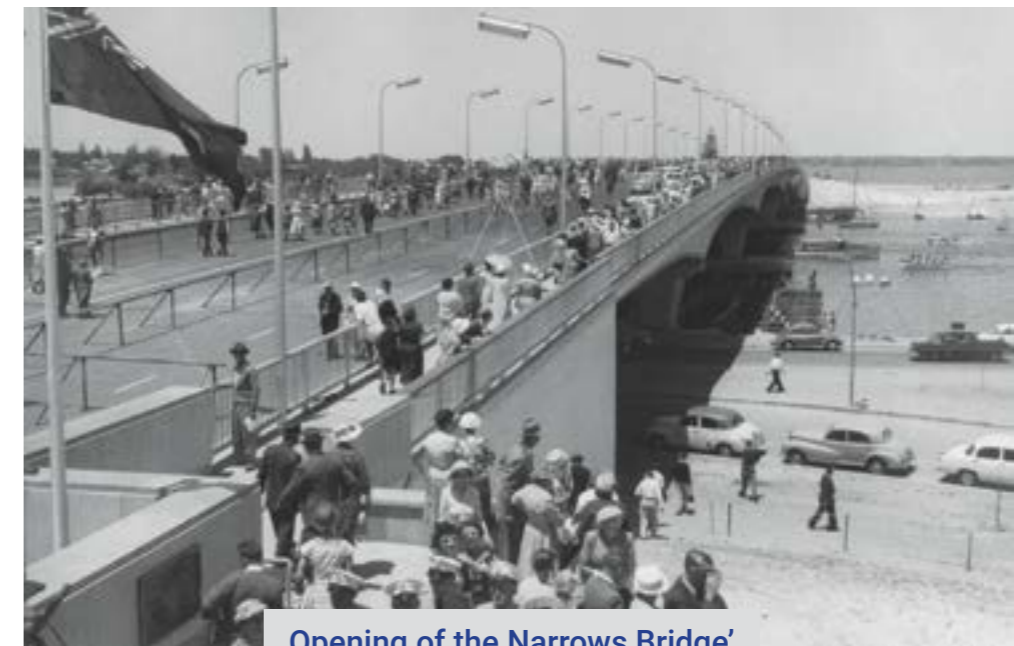
The Governor of Western Australia, the late Sir Charles Gairdner, opened the bridge amid great excitement on 13 November 1959. The Narrows Bridge ultimately cost £1.5 million and, for a short while when it was first completed, was the longest freestanding concrete arch bridge in the world, 360 metres in length.

Narrows Bridge is falling down

The construction went well although we had one major scare. The Narrows Bridge was built from large pre-cast concrete

blocks, which were placed on a timber framework, which in turn was sitting on timber piles driven into the riverbed. There was a timber walkway from one side of the river to the other so we could cross.

Crossing the walkway one day with Leif Ott Neilson, we looked down a line of piles and noticed that a number of them were displaced. We discussed how this could be happening. They were very heavy karri piles and had been placed in the right position, but they had now moved up to a metre away from the north bank. The bow had been caused by thousands of tonnes of sand dumped on a reclaimed bay at one end of the bridge where a freeway interchange was to be built. We concluded that the sandfill placed on the north shore was sitting on mud that was 10 to 20 metres deep, and as it was filled it kept subsiding. The mud, as well as being compressed vertically, was also being protruded horizontally and pushing over the piles. What followed from that was that the same mud being extruded horizontally would push over the permanent steel piles, which held the northern abutment.



Opening of the Narrows Bridge'

We notified Maunsell & Partners, and then jointly devised a plan to place large steel caissons around the permanent piles displaced in the opposite direction to allow the caissons to move up to about a metre before the piles were displaced. It apparently worked very well. The bridge is still standing.

What was unknown was how much the movement would be over time, and once the caissons had moved up against the permanent piles, the permanent piles would be displaced which would in turn displace the pile cap of the north abutment.

If this movement were along the longitudinal axis of the bridge, it would not be of much concern because the piers sitting on the pile cap and holding the bridge are designed to move longitudinally to take up temperature movements. The real danger occurs because the mud movement isn't in this direction, but at an angle downstream, which could cause the pier to move transversely across the width of the bridge. There are four piers across the width of the bridge, and three of the bases of the piers are on rollers to allow transverse expansion and contraction with temperature, but one of them by necessity is fixed. This means that movement of the pier downstream will put a high downstream force on the bottom of the fixed pier. The piers are Y-shaped, and a high force in this direction would cause failure in bending of the pier, which would show by the concrete failure in the downstream corner of the Y.

If the Danish design, opposed by the consultants at the time, had not been adopted, the displacement might not have been noticed until it was too late. Without that line of temporary piles, we would

never have known what was going on 10 or 15 metres below the riverbed.

Whenever I drive under the northern abutment I watch this corner with interest, but there has been no failure. I suggested when we were casting this pier we should incorporate at that point a small bottle with a note that said "This is where we expected the bridge to fail (chuckling)". Unfortunately Leif Ott Neilson, who had no sense of humour whatsoever, was appalled and strictly forbid any such action. I often think if I see the concrete starting to spit out I'll accelerate and go a different way tomorrow.

The temporary jarrah piles from the Narrows Bridge were subsequently used at the small boat anchorage at Royal Perth Yacht Club and Freshwater Bay Yacht Club and at jetties at Dongara and Jurien Bay. These jobs were highly rewarding because the materials had already been paid for in the Narrows project.

The ferry and the Narrows Bridge

Another story at the time we were building the Narrows Bridge relates to the ferry. The bridge is made up of pre-cast concrete blocks that had to be tensioned with heavy wires, rather like a stack of books on a table which, if you push the ends together hard enough, will lift up even though they're not stuck together, and will support quite a heavy weight in the middle.

When raising the very large pre-cast concrete blocks into position on their timber supports, there was always a certain amount of movement as the timber structure was loaded. Once the movement had settled, we had to jack up the blocks into their correct position. At

the centre span of the bridge, we had to allow an opening in our piles and timber framework to allow the ferries to pass up and down the river, and on the walkway that went from end to end we had to have a moveable section.

To allow the ferries to pass we would lower the central section of the walkway to the bottom of the river, and then winch it up into place after the ferry had passed. To position our concrete blocks across the central section we needed a steel truss spanning the opening onto which we placed our concrete blocks. Each end of the steel trusses was supported by reinforced timber framework and additional piles to carry the greater weight. When we started loading this section, we measured the settlement as we put on the blocks so that we would know when the settlement stabilized, and could jack the blocks into position. Normally when we did this, the blocks would settle half an inch immediately and then ¼ inch in the next hour and then 1/8 inch in the following hour, and then stabilize.

We spent one morning loading blocks on to the central section but, as we measured them, they moved half an inch in the first hour, an inch in the second hour, two inches in the third hour, and then we started taking them off. We had worked late into the night, but had still only taken off a portion of the blocks when it got dark and we quit.

I was having dinner that night when I had a phone call from the Master of the Ferry. He was highly irate and shouting "What the hell's happened to this bloody bridge of yours?"

I had visions of the whole of the central section collapsing into the river, so I asked "What's the problem?" He said "The footbridge is still in position and I can't get through." When I said "Is that all?" he got more angry and said "What do you mean? I've got 100 passengers on my ferry and I've had to bring them back to the jetty." He didn't realise what a disaster it might have been. So I assured him I would ring a couple of operators and ask them to lower the footbridge and have it in place within the hour, which is what happened.



Position of the Narrows Bridge today, with the new Clough building centre right

07

FAMILY

Jenny Sue, John McRae, Rebecca Margaret, Elizabeth Anne, William McRae and Margaret

Jenny Sue was born on 12 July 1954. Sue was a beautiful baby. When she was one year old she had blond hair and Vie used to send us simply outstanding clothes from America. People used to stop and stare at her. She was like a little princess. She didn't like being left with other people, and the only person who could look after her was Uncle Bill's wife, Gert, who lived next door.

When Marg was in hospital having Jock, I had to look after Sue and when I visited projects or went to the office I used to

take her with me. I recall taking her to North Fremantle to the Commonwealth Oil Refinery, as I had to look at something on the roof. It was a Saturday so nobody was working. I sat Sue at the bottom of the ladder and asked her to stay there while I checked out a problem in the roof. I was halfway up and looked down, and Sue was climbing up. I immediately went down and grabbed her and put her under my arm and climbed up to the roof with her. Marg would have died if she had seen me doing that!

John (Jock) McRae was born on 8 October 1955, nearly 15 months after Sue. I went in to see Jock just after he was born. He had no forehead. His head went back from the top of his eyebrows like a Neanderthal



Sue, Harold, Becky, Marg and Jock

Sue, Harold, Becky, Marg and Jock

man, and his eyes were crossed. The matron, who was tough as boots, carried him out and I said something like I think Sue will always be my favourite. Marg always recalls the matron saying "Go on, I've seen worse than him."

Rebecca Margaret was born on 4 January 1957. Jock was just 14 months older. After a great deal of debate I got my way and she was named Margaret Anne, and all the necessary papers were submitted to the Department of Births, Deaths and Marriages. However it was not to be. A month or so later the Department returned all the papers because they had been completed with a biro and not with real ink and a pen with a nib, which was the law. Marg seized the initiative and without

reference resubmitted all the papers with the name changed to Rebecca Margaret!

Rebecca and Jock were great mates. Neither of them learnt to speak early, and for their first few years they spoke a gibberish that they both understood clearly, but was incomprehensible to everyone else.

I remember when Rebecca was only two or three years old and Marg took the four children and a similar number of neighbourhood children to Cottesloe Beach one Easter. When she got home she ordered them all into the bath, and it was only then that she realised Rebecca was missing. Pandemonium! She checked with the neighbouring children. Rebecca had not been in the car. She bundled all the

children back into the car and tore back to the beach. No Rebecca. Jock, who had received a huge chocolate dinosaur for Easter, vowed to give it to Rebecca if she were found. Marg, frantic with no Rebecca at the beach, called home and the neighbours answered and said that Rebecca had been brought home. Given that her only speech was incomprehensible, it's still a mystery to this day how she told her rescuer where she lived. It is also a mystery who her kind rescuer was.

Elizabeth Anne arrived on 14 August 1958, about 19 months after Rebecca.

William McRae, or 'little Bill', was born on 29 December 1960 and Margaret was born on 29 January 1965. I was determined that this time our daughter be called Margaret after Marg, and so I insisted on no middle name, but Marg called her Mimi from the day she was born and that was that.

About 1961, in the back garden at 93 Stanley Street, Nedlands
Back row, Harold, Vi McRae, Ollie Jolley, Norman McRae
Front row, Jock, Becky, Marg, Bill and Sue



1961 Harold with Becky, Jock, Libby and Sue



1965 Becky and Jock with baby Mimi



1965 Libby, nursing doll, Bill, Harold, Marg, Sue and baby Mimi



1967, Easter morning, Libby with hair curled especially for the arrival of the Easter bunny, Bill, Jock, Mimi, Sue and Becky, and some dinosaur Easter eggs



93 Stanley Street, Nedlands



1968 Christmas morning, Bill, Jock, Harold, Marg, Mimi, Becky and Libby



Libby, Sue, Becky and Jock in PLC and Scotch uniforms and Mimi

Building the first above ground swimming pool

In about 1966 I decided I could make a better swimming pool than a bought one. There were no, or very few, underground swimming pools in those days. To start with the pool was down by the back fence and, as I remember it, circular, made of flat galvanized iron and lined with canvas. I filled it with water, but the canvas rotted and let the water out, so I moved it up to the middle of the lawn on the Parkinsons' side, and then lined it with thick blue plastic. When it was finished, it was quite smooth inside, and I split a hose and put it around the top so the galvanized iron top was protected to prevent the kids cutting themselves.

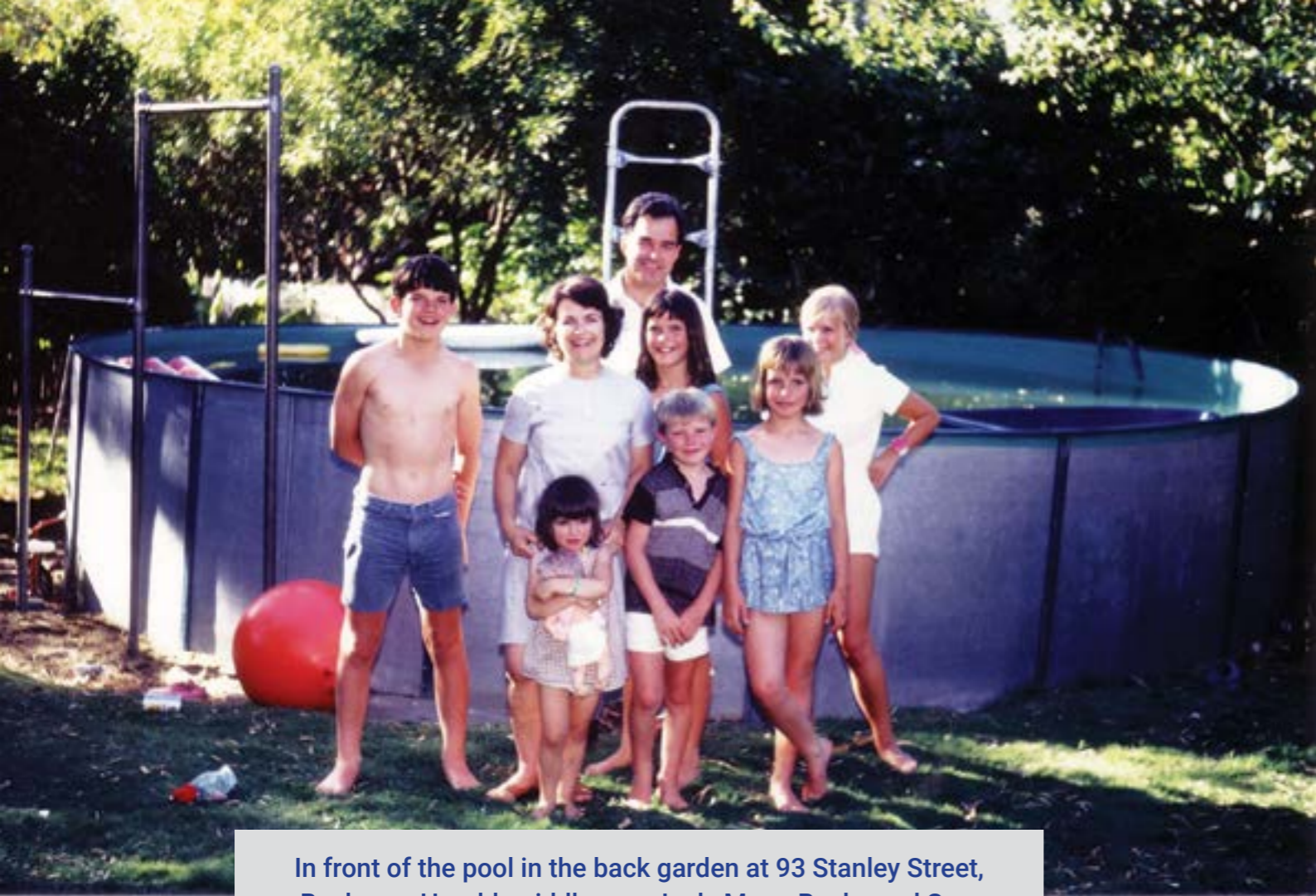
Next to the pool in the middle of the garden we had some poles, which I used to hang from to make my back feel better. There were three poles with two bars across, and the kids would jump or dive into the pool from them. The pool also had a pull-down ladder. We learnt how to collect the leaves by running around the edges and creating a whirlpool so all the leaves, being lighter, would go to the centre and the kids would dive in and grab them. There was no filtration system, but when it was being used the kids did bombies, which spilt water over the sides at a tremendous rate so it got a lot of water replacement with the hose filling it up. No one seemed to suffer from the lack of filtration.



Vie, Harold, Cathy Birkett, Norman, Norma and Marg



Jock and baby Mimi



In front of the pool in the back garden at 93 Stanley Street, Back row, Harold; middle row, Jock, Marg, Becky and Sue; front row, Mimi, Bill and Libby

Guy Fawkes night

“Remember, remember! The fifth of November, the gunpowder treason and plot”. Back in 1605 Guy Fawkes had tried to blow up Parliament, but was thwarted and 5 November was celebrated thereafter by setting off fireworks. As well as the fireworks, it was common to build a big bonfire. When Jock was about nine or 10 years old, he built a bonfire in the middle of the backyard – an enormous pile of anything that was highly flammable – so that we could have a bonfire night. Anyhow, Jock was building this big bonfire that, of course, had to be lit. So he got a lot of crackers, broke them up and got the gunpowder from them, and made a long fuse to the pile. The day before Guy Fawkes, Jock was intrigued and decided

that he’d test the fuse on the extremities of the bonfire, but it caught so fast he couldn’t stop it, and before he knew it the whole thing went up in the middle of the day.

We used to let off crackers and skyrockets. It was about 1965 that the government made fireworks illegal and you couldn’t do it anymore.

Jogging at the beach

Lockie Simpson was an insurance representative, I think, and we did some business with him and I got to know him. He went running on the beach every morning, and one day he said to me “Why don’t you come with me? I’ll pick you up at 7 o’clock.” It became a routine. He’d blow his horn and

I’d be waiting with whichever kids wanted to come. Sometimes lots of the kids would join us. We’d run to the Cottesloe Groyne, have a swim and be home before eight. Sometimes Jock used to really upset me, because he could run backwards faster than I could run forwards! At one stage Marg said in front of everyone “I hope your father doesn’t overdo it. He jogs along until a pretty girl comes the other way, and then his chest goes out and his chin goes up and he increases the speed.” It was probably true.

Jock and the toothbrush

I knew Jock kept his toothbrush up high on the ledge in the yellow bathroom, and so I took great relish in telling him one day how I was the only one in the family that cleaned the toilets, which was half right, and about the difficulty of getting into the nooks and crannies and how I used a toothbrush that I kept high on the ledge in the yellow bathroom. He yelped with concern. It was only a moment of glory because I had to tell him that I didn’t really do that!

ENGINEERING JOBS AND BUSINESS ASSOCIATES



Christiani & Nielson and CBH Grain Silos, Ord River Diversion Dam and Durack River Bridge from 1959

After we finished the Narrows Bridge in 1959, we continued to work with Christiani & Nielson for several years on a number of large contracts. We built the foundations of the grain silos for Cooperative Bulk Handling in Geraldton in 1961 for \$240,000. Marg and I went up and lived there for several months and took the five kids with us, including Bill who was just a baby. We had a great time actually – we rented a house and I remember we got into trouble when we left, because we'd scratched the table cleaning it and we had to replace it.

Together with Christiani & Nielson, we rented an old house in Perth that belonged to a very old Western Australian family. It was at the end of Malcolm Street and backed on to 24 Mount Street, where the Mount Hospital was. It was also next to the Mitchell Freeway where they now have a footbridge, and was well located on the boundary of a project we were doing on the Mitchell Freeway. Everything else had been resumed and demolished.

In 1962 we won the first stage of the Ord River Diversion Dam, which was a \$6 million project, and while we were still doing that we won the contract for the bridge over the Durack River just out of Kununurra. Don Young, Peter Knight and Uffe Hansen, a Dane, all worked on the Kununurra projects. When I first went to Kununurra to have a look at the site, we slept in tents under Kelly's Knob. We were up there at Christmas time in the middle of the wet season. It rained like hell, and at

midnight the lightning was so bright and so continuous you could almost read by it. I've never seen lightning like it. Never seen rain like it either. Particularly when you are in a tent, you notice the rain.

There were up to 300 people working on the dam, but it was really remote. To get there you flew in a DC3 from Perth to Wyndham, and then took a vehicle along a gravel track to the dam site. It was in the complete wilderness, the temperature was often 45 degrees and the humidity close to 100 per cent – and there were flies.

We were creating all sorts of new work environments and conditions, because it was quite obvious that we had to provide camps, living quarters, a mess and so on. This had never been done before. There were no rules, and the Unions didn't know what they wanted. And it was tropical. So, we had these timber and corrugated iron huts that were about 8 x 8 with two double bunks in every room. We had flywire netting and shutters, but no air-conditioning of course. I remember we had great arguments with the Unions about the ablutions. They said "What about the showers?" I said "Yes, we've got showers." "Hot water?" "No hot water." So there was a great argument. We had to have hot water. As it turned out, we were getting water from the Ord, which was about two or three kilometres away. We had a pump down at the river, and we were pumping the water across to where the camp was, so we'd just laid a two-inch galvanized line on top and of course the water came out red-hot. We didn't have any trouble with hot water. They just couldn't get cold water! If the Unions had been smarter, they would have said you have to guarantee we have cold water.

The Ord River Diversion Dam and the Durack River Bridge were two quite big projects, which meant that we were able to keep most of our people employed, a real concern after the Narrows Bridge was finished. While we had joint ventures with Christiani & Nielson on the Ord and Durack projects, we maintained our independence, which was just as well as on completion of those projects we went our separate ways, and effectively became competitors. There was a bit of a falling out. After they had been here five or six years they knew the local scene as well as we did, so they could do without us and we could do without them. I remember we had great arguments about the windup of profits of the Ord River Dam and the bridge projects. In the end we came to a compromise and split up. For a number of years, probably through most of the sixties, we competed. By the end of the sixties there were a few rough spots in terms of the economy and resource developments, and when the rough spots came, like the Poseidon boom then bust, they decided to go home.

Muja Power Station, Collie, 1962

Independently, in 1960, we won the \$200,000 contract for five spiral ramp footbridges to cross the Kwinana Freeway, and Albert Scott managed those. We also won a big \$3 million contract in 1962 from the State Electricity Commission to build the new coal-fired Muja Power Station and concrete supply in Collie, and Albert Scott and his wife Maureen went down to live there to run it for four years. We badly needed contracts at that time. We'd missed out on a number of contracts and actually lost the Muja Power Station by a small amount, but the successful bidder went broke and so we got the job. The work

at Muja went on for five years and was a bread and butter job for the company.

Standard Gauge Railway with Perron Brothers/Thiess Brothers 1964

In 1964 we had a joint venture with Perron Brothers, which was a large earthmoving company owned by Stan Perron and run by Bob Elliot, who had been a year ahead of me at university. At the time we were a civil engineering company, but didn't do any earthmoving, which requires a very large investment in plant. I always felt much happier spending money on people than on plant, because you got more return.

Together, we won the first stage of the Standard Gauge Railway that runs up the Avon Valley for \$560,000. We were building the bridges and culverts and Perron was doing the earthworks. Once again Maunsell's were the consultants whom we knew and behaved reprehensively.

We decided that we could save a lot of money if we took out two bridges and built the railway through a very large hill, but Maunsell's thought it would be cheaper to build the bridges. They would go across the river once, and then again. Our design skirted the river, which meant a lot more earthworks, but you didn't have to build two bridges. We put in an alternative bid, which was the lowest price, but it was just at this time that Thiess Brothers, a big Queensland earthmoving company, came over and bought Perron Brothers.

We were then dealing with Thiess Brothers, and they appointed Dick Sukey to take over from Bob Elliot. Despite the fact that we'd put in a much cheaper alternative design, the consultants, in their wisdom, decided that it was unfair on the other tenderers

and though we protested strongly we were ignored and had to bid again. Our bid was still the lowest, and we were called to Melbourne to meet the client, the Commonwealth and State Government Railways. Dick Sukey, as the new manager of Thiess, our partner and the prime bidder, Bob Elliot, Stan Thiess and I all went over to Melbourne and began negotiations to try to get the contract.

We had a lot of conditions in our tender and they were going through them, and we didn't know where we stood. We wanted it desperately, but on every condition the client said "We can't accept that. No one else has bid that way. You've got to give up that condition." We were really on the back foot.

One of their fellows had a great big spreadsheet, which had a list of all the tenderers and the prices they'd bid on all aspects of the tender. We weren't doing too well at all. An issue arose, and the client suggested they meet privately and asked that we go into another room with some of their people. We started talking about other issues, which weren't so important. I was sitting opposite the bloke who had the spreadsheet, and as the discussions took place he lifted his spreadsheet carefully and told us that we couldn't do this and that. But this time he had a window behind him and I realised I could read through the paper! But everything was mirror image and back to front — I could read all the contractors' names, I could read all the prices, and I could read all the totals. It was quite obvious that we were cheapest by a mile.

I was sitting opposite him and I had my Bill of Quantities that we were referring to, so I wrote down the next three or four

contractors and what their prices were on that. They were completely oblivious to what was going on, as they were busy discussing something else, but I had to get the message to Dick Sukey, who was leading the discussions. Something came up, and they wanted to look at the Bill of Quantities and I held it to my chest and said "You can't have mine, you can't have mine." He looked at me as if I were a complete nut, and I said "Dick, we've got to go to the toilet." He said "I don't want to go to the toilet," and I said "You need to go too." He said "No, I don't," but I finally grabbed him by the arm and out we went. I showed him the numbers, and when we went back into the meeting the whole of the tenor of the argument changed. We wanted more for this and more for that.

We did well out of that change, and we still won the contract for about \$900,000. Years later I ran into the fellow at Maunsell who had held the spreadsheet and I told him. He said he'd wondered why the meeting had changed as it did!

Peter Knight worked on the Standard Gauge Railway and then took off and went to Japan. He married Glen and went to Canada where he worked for Bechtel and was away for a decade.

Stan Perron

When Thiess took over Stan Perron's construction business in 1961, people said that Thiess had paid twice as much as it was worth and that no purely Western Australian business with only three executives could be worth that amount of money. But, as Ron Manners said, Stan Perron was always very innovative and was the first to bring twin-powered scrapers into Australia.

At that time Toyota had just started shipping vehicles to Australia, and they'd given the Australian distributorship to Thiess in Brisbane. When Thiess took over Stan Perron's earthmoving company, as part of the deal he got the Western Australian distributorship of Toyota, and that proved to be a tremendous agency. Stan once said to me "Nobody wanted a Toyota distributor; they didn't want to sell Jap crap. We thought we'd sell 10 or 20 vehicles a month, and now we sell a couple of thousand a month."



2014 Harold and Stan Perron

Stan Perron is smart, and a tremendous guy. We sit together once a year on the Ernst & Young Entrepreneur of the Year Awards, and last year we selected Andrew Forrest and we both went to see him to tell him about it. We were very impressed with Andrew Forrest, started talking about his idea of employing Aboriginal workers and He was really hung up fighting slavery in Southeast Asia. He'd got both Bill Gates and Warren Buffett on side to put money into some fund or other.

Bill has a story of when he and Twiggy and a group of mates were in Melbourne and they went to the Crown Casino. They were all a bit drunk and boisterous and

the fellow running the swish night club wouldn't admit them, so Twiggy rang up his mate James Packer and asked him to let them in. He pulled rank: "It's no good having mates if you don't use them."

Garrick Agnew

About the same time as I went to California on a Fulbright Scholarship in 1951, Garrick Agnew went to Ohio State University on a swimming scholarship. Garrick was four years younger than me, and a great swimmer. He had represented Australia in the 1948 and 1952 Olympics and took home a silver medal in the 1950 Commonwealth Games as part of the freestyle relay team. After he graduated from Ohio he went to Harvard for a while and came back to Perth at about the same time as I did.

Garrick set up a business, trading cattle from the North-West to the Philippines. He then started selling manganese through Don Rhodes at Port Hedland to the Japanese steel mills, and in doing so established a relationship with Mitsui & Co, the leading Japanese trading house that had just set up in Perth. He asked Mitsui what other commodities they would like to import from Australia, and they said they would be interested in a supply of salt. On the basis that he knew there was salt in the salt lakes at Rottneest Island, Garrick sold 200,000 tonnes of salt to Mitsui and then asked me how it could be loaded onto a ship.

It quickly became apparent that it wasn't practical to mine or ship the salt from Rottneest Island, so he looked for other salt fields. We went to a place 82 kms north of Geraldton and looked at harvesting the dry salt in the salt lakes there, which

were very soft so you could walk across them, but not drive a 4WD across them. We had a 4WD Toyota, the first Toyota I'd ever seen, which we bogged in the salt lake. There was a potential sort of port or barge loading site that we looked at on the coast opposite the salt lakes and we went up there to see how far we'd have to put a jetty out to be able to bring in a barge or ship. From the beach you couldn't tell how quickly the water increased in depth, but we had a 100m tape and I recall that Garrick got me to walk out until the water reached my head and he still wasn't satisfied and said "Hold your breath and go out another 20m!"

That option also proved to be unsuitable, so he shipped a small cargo, 10-20,000 tonnes, by trucking the salt to Geraldton. We couldn't drive vehicles on the salt, and we got small trucks and put giant balloon tyres on them so they could cross the salt bed. He got a cargo away, but the quality was so bad that when the Japanese analyzed it they said they didn't want any more of that, but were still interested if he could get some good quality salt.

Shark Bay Salt, 1964/5

Garrick then decided he'd build his own salt field and got me involved. We went about it scientifically, and started by getting a rainfall and evaporation chart to see where on the Western Australian coast you had maximum evaporation and minimum rainfall and decided that Shark Bay was the best location – and it was. We then drove up to Shark Bay, some 800 kilometres north of Perth, to find a site, and decided that the best site was a low-lying area at Useless Loop.

Having found the site for a salt field, we then had to find a site for a port and decided to drive to the coast. As there were no roads, and it was fairly open country with only low bush, we went cross-country. Most of the country was sand plain that had been blown up from the beach sands, so all the peninsulas run north because of the prevailing strong southerly winds. Driving west, we'd go up a gentle incline and then down a steep descent and then up another long incline. After some time we sensed we were getting closer to the ocean and drove up a long steady incline. I suggested we stop and take a look before we drove down the other side. When we did that, we found that we were on rock and the other side was the edge of the Zuytdorp Cliffs that dropped 20 to 30 metres into the sea with no possibility of getting back! It's where all the ships used to founder along the coastline.



Zuytdorp Cliffs

Adelaide Steamship Company

We then looked for a port inside the bay and decided the best site was off a small island called Topper Island about half a mile offshore. Garrick approached the Adelaide Steamship Company, which was a major Australian-owned shipping company then, because he was very conscious that a large part of the cost of the salt would be its

freight to Japan. He was a very similar sort of salesman to Bill, both great negotiators and brilliant salesmen. They believed in their product and it always showed. On the basis of his 200,000-tonne contract with Mitsui, he persuaded Adelaide Steamship Company to invest in a salt field at Useless Loop and a port at Topper Island.

Shark Bay port facilities, 1965

I was asked to give them a price for designing and building a port which would take ships of 25,000-tonne capacity, the size of most freight-carrying ships at that time, known as the Handy Class. All the jetties in Western Australia up to that time had been built with timber piles and decks, because there was a lot of timber, which was very suitable for marine piles. When I looked at the project, the cost of getting timber piles up to Shark Bay was considerable and I decided we'd be much better using steel piles. Enquiring as to how we could best build dolphins, (marine structures that extend above the water level that typically consist of a number of piles driven into the seabed or riverbed, and connected above the water level to provide a platform or fixing point for the ships to rest against), I found a Perth company representing a German steel group, which produced high tensile steel column sections that locked together to form efficient flexible dolphins, and offered to provide an engineering design. This was a new concept for port construction in Western Australia, so I was pleased to have someone knowledgeable designing the most difficult part.

It was obvious that to build a jetty we would need a large floating barge and piledriver. We didn't own any barges, but discovered that the Emu Brewery had half

a dozen large beer tanks for sale at a good price, and bought six of these very large steel tanks to tie together to form two pontoons, with three tanks in each hull and two parallel hulls like a catamaran, on which we built a pile frame to allow us to drive piles afloat.

We also bought a large diesel hammer, the first in the state, to drive the piles, and trucked all this gear up to Useless Loop.

We built a berth to take 25,000-deadweight-ton (d.w.t) Handy Class-size ships. We also bought high tensile steel piles from Germany with interlocking flanges to make six pile dolphins for berthing and had about 10 dolphins. We connected this to Topper Island with a steel pipe frame jetty about 300 metres long on which we mounted a conveyer to take 1,000 tonnes/hour of salt. At the jetty head, the conveyer discharged onto a fixed horizontal shuttle conveyer, which could extend over the whole of the ships. The ships were winched along the line of dolphins, using ships' winches to bring each of the ship's holds under the shuttle conveyor discharge.

The jetty took a year to build over 1964/5, and the contract value was \$342,000. It was designed for a 20-year life, but after nearly 50 years it is still operating as well as the day it was built. The jetty was the first steel jetty to be built in Western Australia, where traditionally there had always been timber piles and timber decking.

Geoff Smith

Geoff Smith joined us in 1964 and worked on the Shark Bay jetty. We nearly killed him up there. We had a hand winch with a handle with a crank on it that you could wind in and out. One day he was winding

the handle to pull in a barge and something came up and bumped into the barge and pushed it away, pulling out the rope on the winch. The handle came backwards and hit Jeff in the face, and thereafter Jeff had a very rugged face — and we always had a wheel that you pull in hand over hand as opposed to a winch.

Lining the salt ponds

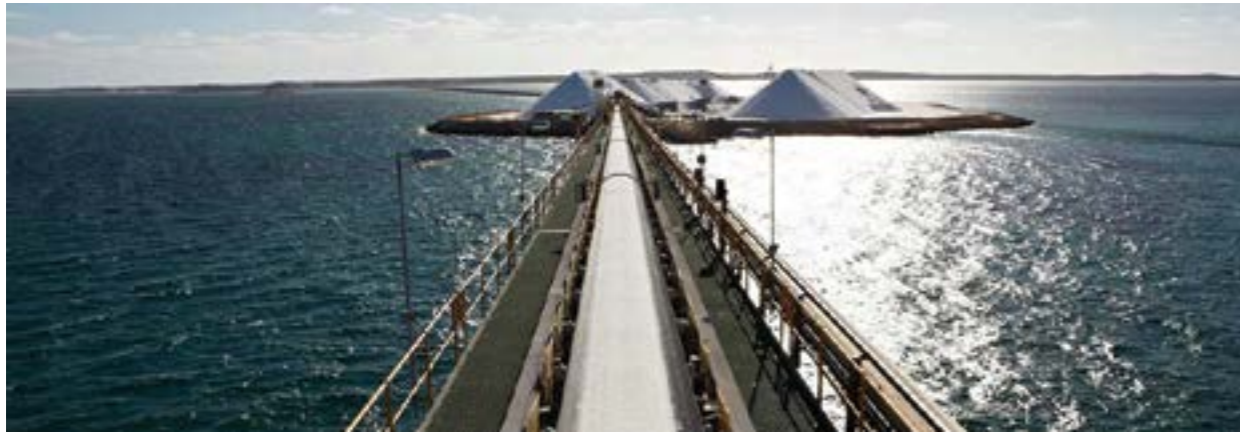
The Adelaide Steamship Company, which was financing and managing the building of the salt field, initially started transporting salt from the mainland to Topper Island by barge. They had closed off a section of Useless Inlet to allow the seawater into the lower inlet to evaporate and concentrate, and then pumped it via an open flume about 20 kilometres to Useless Loop. They quickly found that the area at Useless Loop where they proposed to produce the salt was completely inadequate. This was partly because they had to concentrate the brine to precipitate salt. But the floor of Useless Loop is largely sand, and we found that the interchange between the brine and the groundwater was such that the brine never concentrated enough to precipitate salt, no matter how much it evaporated. When they checked how the pilot plant had precipitated salt, they found it had had the same problem, which they fixed by lining the ponds with plastic. In the end we had to line all the precipitating ponds at Useless Loop with plastic to be able to precipitate salt.

Funding by Mitsui and speaking Japanese

The continuing series of failures and disappointments got to the stage where Adelaide Steamship Company decided to spend no more money on the field, but to

sell out to anyone who would take it off their hands. Garrick and I looked at the problems and decided it needed about \$1 million or more spent on it to get it into production, and we didn't have the money. In 1972 Garrick went to Japan and talked to Mitsui, who had contracted to buy the salt, and convinced them to put up a million odd dollars to get a 50 per cent interest, quite a large sum of money at that time. They agreed on the basis that we went ahead and made the changes, which included a causeway from the mainland to the island and an improvement to the Useless Loop ponds.

We were halfway through this when we got a letter from Mitsui saying they'd made a mistake! They hadn't meant to give us \$1.5 million; they'd only meant to give us \$1 million. Garrick sent me to Tokyo to negotiate with the Japanese, which I did. When doing this you always sit around a table with at least six to eight Japanese and an interpreter. At this stage I was there by myself and they always communicated between themselves openly, rightly believing that I didn't know the language. I was only supported by our agent in Japan, a Japanese-speaking Australian. I spent some time going through all the works that were needed to bring the salt fields up to scratch and justifying why we needed the full amount of money. In explaining the technology, the Japanese used a number of English words because they don't have them in Japanese. At one time, one of them asked a technical question in Japanese but I knew what he'd asked, so instead of waiting for their interpreter I started answering in English. The Japanese immediately picked this up. So when I answered the question without it being translated, they asked "Do you speak Japanese?" "I don't speak it very well," I



Salt ponds at Useless Loop

responded, "but I understand it." Whenever they started speaking in Japanese after that, I'd pull out my notebook and start making notes. After this, they stopped speaking so much to each other in Japanese.

Shark Bay Salt continued for a number of years, always battling to get sufficient production, but we closed off further large areas of Useless Loop and lined very large areas of Useless Inlet and finally were

able to steadily produce about 1 million tonnes per year of very high quality salt. The problem with Shark Bay Salt was that it was always underfunded. It was a most heartbreaking thing, because no matter how hard we tried we would just clear up one bottleneck and the next one would appear.

In 2005 we sold out of Shark Bay Salt with Mitsui taking full control.

Family Trips to Shark Bay

Sometimes in the holidays we would drive the station wagon up to Shark Bay and stay at Useless Loop, which was the town where the mineworkers lived. Fishing rods always stuck out of the rear window, so we could never seal the car windows and everything would get covered in a layer of dust, including ourselves.

Useless Loop had a mess and sleeping quarters for the men and a dozen houses, and we used to stay in one of houses. There was even a school. Useless Loop and all the operations were on Carrarang Station, a big station of about 90,000 hectares comprising the whole of the west



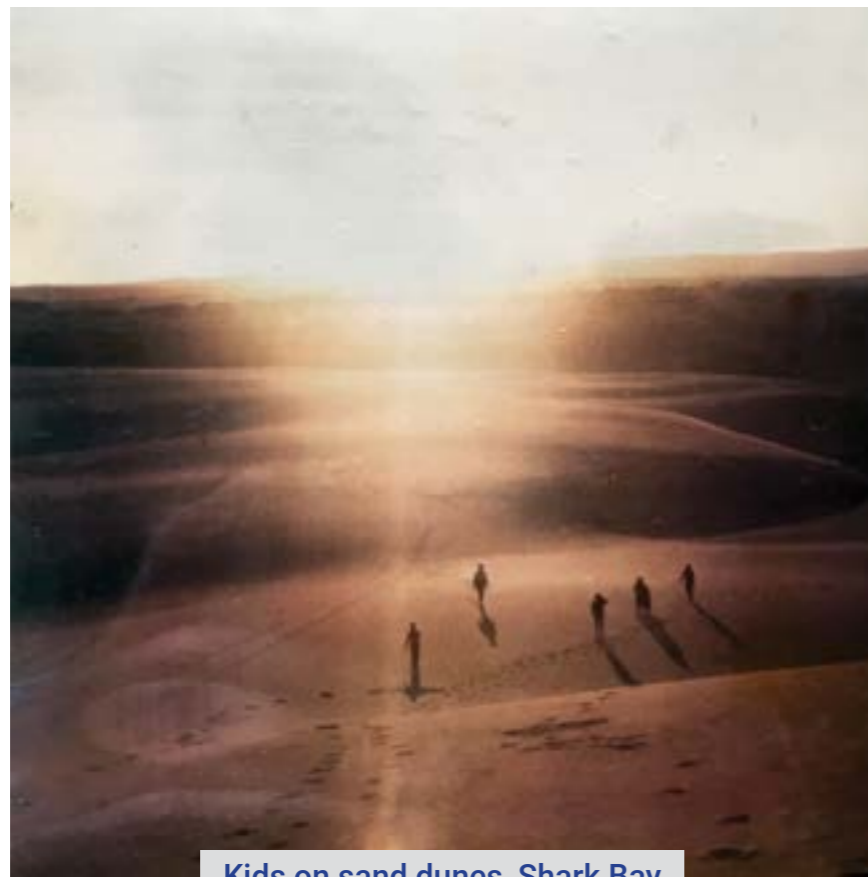
About 1969, Mimi, Becky, Sue, Libby, Bill at the lighthouse, False Entrance, Shark Bay



1974 Marg and Harold, Topper Island, Shark Bay



1985 Carrarang Station, Shark Bay, Marg, baby Lucie and Harold



Kids on sand dunes, Shark Bay

of the Carrarang Peninsula. We had quite a lot of sheep at that time, and a fellow who was married to Faye Agnew's sister was running the station. He had previously been a station owner and was looking for a job. If you went across Brown Inlet, where the station homestead was, there was the wreck of the lifeboat of the German ship that sank the Sydney. It had come through South Passage and settled in Brown Inlet.

Jock was mad about fishing, and we used to drive over the sandhills to take him to South Passage where a crayfisherman lived in a hut. Jock had some hazardous experiences up there. When Jamie Taylor was with him on one occasion they were going to live off fish, but the fish weren't biting so they were living off oysters. Another time, Jock sailed to the northern end of Freycinet Prong on a catamaran, about 20 kms or so, and he had to walk back. A howling southerly came in so he got there in no time, but he couldn't sail back again. It blew night and day for a week. He had been there for a few days when he decided he had to walk back as the wind wouldn't die down. He had made his main camp two or three kilometres north of where the boat was and his water was at the camp. He had to decide whether to walk a further 5 kms to get the water or just walk back. He made the right decision and went back to get the water.

Joint Venture with Harbourworks and Dampier Jetty, 1966

Shortly after we'd built the Shark Bay Salt jetty at Useless Loop, the first steel jetty to be built in Western Australia, we had a visit from a Mr. Wesselingh from Delft in Holland, representing Royal Netherlands Harbourworks. He had built many jetties

in China before the War, and had been building jetties in Indonesia when the Japanese invaded, and was a prisoner of War for the duration. Wesselingh had had a long association with Hamersley Iron (today Rio Tinto), the mining company which had a few years previously built a jetty in South Australia. Harbourworks had now been requested by Hamersley Iron to build a jetty at Dampier to ship about 1 million tonnes of iron ore per year in ships of up to 100,000 tonnes. He asked me if we had any experience in doing this type of work, so I very proudly pulled out the drawings of the Shark Bay Salt jetty, which I had personally designed and which we'd built. He was very impressed and said "That's precisely the type of construction that we'll be building at Parker Point on the Dampier Archipelago."

At that time the Dampier Archipelago was separated from the mainland by mud flats, and access was restricted because the mining company had a gate across the causeway they had built to get access. Dampier was the Wild West then; there was nothing there.

Harbourworks sent out a project manager called Jan Small and his wife Francesca, and they lived on the corner of Princess Road and Fairway in Nedlands. We became good friends. Francesca immediately started having children: Daniela, Hannah and Vessel. She towered over Jan. He was 5 foot 6 and she looked about 6 foot 6 and still wore high heels!

So we formed a joint venture as Harbourworks Clough. We provided the labour and foreman, and they sent out half a dozen Harbourworks people to work with us under Jan, mainly engineers and an accountant. In 1966, we finished the

Dampier Jetty on time and on budget for \$2.4 million.

Hammersley Iron was the first iron ore company to open up after the ban on iron ore exports was lifted, and it got into production within two years. Today it would take about 20 years, but in those days there were no regulations.

We started the joint venture with Royal Netherlands Harbourworks in 1964, and 50 years later Clough is still in a joint venture with the same Dutch company, except they've been taken over two to three times and they're now called Royal BAM. It's one of the longest enduring joint ventures I know of.

Projects in the Pilbara – from the mid-1960s through the 1970s

We did a lot of work in the Pilbara around this time. We built most of the jetties on the Western Australian coast. The sites and camps attached to them had the atmosphere of frontier towns: red dust, mud, and temporary housing. We often had to supply water and electricity and build roads for construction camps before the real work began.

After completing Hammersley Iron's loading jetty in 1966, we built a submarine pipeline and marine terminal at Barrow Island in 1967 for \$2.4 million in a joint venture with Harbourworks. In 1965-7 we completed work on the \$20 million Harold E. Holt Base at Exmouth for the U.S. Navy in a joint venture with Koppers Co out of Pittsburgh. In 1968/9 we constructed



Cape Lambert Wharf, 1973

Dampier Jetty



two power stations for BHP at Mount Whaleback and Port Hedland for \$3.5 million, and then in 1969 the Millstream-Dampier water pipeline for Hammersley Iron for over \$3 million. In 1973, in a joint venture with Harbourworks, we built the Cape Lambert jetty and port facilities for \$26 million. In 1975, we completed the \$1 million Paraburdoo water supply project, and in 1977/8 an \$8.3 million pipeline to supply additional water to the mining town of Tom Price.

Indonesia, 1968

I first went to Indonesia in 1968, shortly after the revolution that ousted the first President of Indonesia, Sukarno, in 1967. Sukarno had been introducing communism and had a lot of Russian money and

support. There are actually Russian-built monuments throughout Indonesia. In Jakarta, there is a statue of a very athletic man holding a flame, the flame of liberty, that stands 20 metres high, which people refer to as 'Hot Plate Harry'. He's supposed to represent Indonesia's fight for freedom from the colonial powers. There's also an obelisk in central Jakarta that's a monument to the freedom of Indonesia. In 1968, they were still shooting the Chinese-Indonesian moneylenders. Communists were shot or sent to the concentration camps that existed for 10-15 years, though they didn't call them concentration camps.

In 1968, Suharto, the General of the Army, was just establishing himself, fairly delicately initially, because the revolution was led by the Indonesian generals and

started when Sukarno called for a lot of them to be shot. A lot of them were shot, but a lot survived and they started shooting back. Sukarno was placed under house arrest, where he died a few years later. Still, this was better than being kidnapped and murdered, which Sukarno had done to six of Indonesia's most senior army generals in 1965. They managed to change government from one dictator to another but, fortunately for Australia, Suharto was western-oriented and anti-communist.

In 1968, we had a joint venture with an Indonesian businessman, Abdul Muiz, who had a company headquartered in Medan in North Sumatra, right next to Aceh where there are more fundamentalist Muslims. Les Smith, who was Geoff Smith's younger brother, introduced us to Muiz.

Les had previously worked for 10 or 15 years on Christmas Island with Indonesians and Malays and had become fluent in Bahasa. He suggested that we should form a joint venture with Muiz on some upcoming projects.

Dodging bullets with Geoff Smith in Indonesia, 1968

In 1968 Geoff Smith and I went to Jakarta on our way to Medan. At that time the only European hotel in Jakarta was the International Hotel, which was run by an international airline, which had a link with a credit card that gave you preferential treatment. When we arrived at the hotel there was a long line of people waiting and there were no rooms. I remember the boss of Colonial Sugar Refinery, a company 100 times bigger than ours, was waiting. I gave them my credit card and they gave me preferential treatment – I got a room

straight away. When I asked if a second bed could be arranged in my room for Geoff, they explained that it was a double room!

The International Hotel was in the centre of Jakarta. At that stage the main road in Jakarta was Jalan Tharim, and the Australian Embassy was only a couple of hundred metres down the road. The whole street was lined with unfinished concrete-framed buildings in various stages of completion, many of which had green vines growing all over them. The Russians had started them when Sukarno was in power and Russia was putting a lot of money into buildings and monuments. I remember discussing with Geoff that with accommodation and everything else so scarce, there must be a way to finish the buildings profitably.

We decided to walk to the Embassy and went down to the ground floor, where there was an open lobby with a number of large pillars, two metres in diameter. Just as we walked outside, about 20 white-clad students came running round from behind the hotel and across the front. We couldn't see what they were doing, but suddenly there were 20 - 30 soldiers with guns chasing after them, shouting and shooting above their heads to get them to stop. It was quite apparent that it wouldn't take much for a soldier to shoot a couple of the students to make a point. I remember standing behind one of the big pillars. The students kept running, and disappeared down the street and when we reckoned it was safe to come out we went to meet the Ambassador and his team at the Embassy. We told him the story and he said that it happened all the time. "I hope they were blanks," I said, and the Ambassador replied "They don't issue blanks!"

We travelled from Jakarta to Medan, where we met Muiz and formed a joint venture company called PT Erba Clough. In 1974, we built the main highway through central Sumatra together, which was quite a successful contract.

Peter Knight and Petrosea

Then we won the contract for the first stage of the Arun LNG plant in Lhokseumawe, not far from Medan in North Sumatra, being built by Bechtel. At that stage, Peter Knight was running Petrosea out of Singapore. The first contract was for soil investigations. We weren't experts in soil investigations, but we decided that there were no Indonesian experts and so we bid on the basis that we were going to become experts. We learnt a lot about Indonesians. We had to hire a drilling rig and we found a fellow who showed us the rig – and then we discovered he didn't own it or even know the owner.

Under Indonesian law, Bechtel, the international company that was building the LNG plant, had to have an Indonesian partner to do the work. It was a crazy system and Bechtel didn't get paid and so they didn't pay us. Peter Knight gave me a call and said "What do I do?" I said "Go to Bechtel and tell them that we need to be paid. Our contract is not with the Indonesian company, it's with you."

In the end we got paid, but Bechtel didn't. So when the work stopped the American oil company that was paying for it said that they couldn't work under the Indonesian system – and so they changed the system to allow it to work.

It was tough working in Indonesia then. I recall one instance, Peter needed help,

but the only means of making a long distance call was to drive for eight hours to the nearest airport, fly to Singapore, make the call and then return: a round trip of three days for a few minutes on the telephone. With great ingenuity, Peter found an Indonesian who owned an old Dutch Morse code set and he sent me a telegram, and a few days later I joined him, since I was the only one with a valid visa.

We did these two projects successfully with Muiz, but when we finished he wanted to quit and I never did find out why. He had a reason, but he thought it would upset me and so he told me a lot of other nonsense. That was just when the first oil crisis occurred in 1969 and we went to Saudi Arabia and worked there for 10 years.

Overtured dredge

This was a hair-raising project we did in Indonesia in the early days. It involved salvaging a semi-submerged 4,500-tonne tin dredge off Banka Island east of Sumatra, a major tin mining area. Alan Keet of Straits Engineering had been awarded a contract to upright a dredge that had turned upside down and needed an engineer to help him, so I sent up Chris McSweeney who was John McSweeney's younger brother, and John was very knowledgeable about tin dredges. I remember going up to Indonesia and we all had a look at the dredge. The tin dredge was essentially a big barge on which there was a continuous chain of buckets, and a plant that separated the sand from the tin and dumped the sand in the sea. But because the chain of buckets extended high above the barge floor, the barge was much more stable upside down than it was right side up.

The Indonesians were mining tin with this dredge, but had stopped it to replace one of the buckets in the chain. In replacing the bucket, they knocked out the pins that held the bucket to the chain, and one fell down the well. They thought it had just fallen into the ocean and didn't worry about it and fixed a new bucket but when they started it up the bucket elevator was stuck. Normally that wouldn't have been a problem but the Indonesians who had tried to fix it had taken the manhole covers off all the buckets, so the buckets filled with water and water filled the whole side of the barge. To save it from sinking, the master dropped the bucket down to the sand and it just kept filling with water and then it flipped, still floating but upside down.

The difficulty in righting the dredge happened because the top of the barge was much heavier than the bottom. We decided to erect an A-frame with 600mm-diameter steel columns to fit another barge up on the top of this A-frame and then pump it with water. When it was lying on its side we pumped sand into the barge that was full of water so that it was heavier than the water and the dredge came all the way up. It had been upside down for a couple of years, so it was a real mess and then we had to empty the sand. But in the end the salvage cost about a third of building a new barge, so it was worth it. All for the sake of that pin!

Agnew Clough, 1969-1977

The next major development was joining up with Garrick Agnew Pty Ltd in 1969 to form Agnew Clough Limited. At the time I thought it was a good idea. At the end of the 1960s iron ore and nickel projects were booming, and Garrick had a whole series of investments and projects

running. He had Shark Bay Salt, Shark Bay Gypsum and a 5 per cent interest in Robe River Iron Ore Associates at Robe River, so he had tremendous 'blue sky', projects with great long-term potential, but never any cash. Conversely, we were in a business where we were generating a lot of cash and paying a lot of tax, but could never see more than six months in front of us. We decided that if we put our two businesses together we could get the best of both worlds. We could put our cash into Garrick's mineral developments, save a lot of tax and participate in the great blue sky, which appeared to be about five years ahead.

We got half of it right, because we certainly solved our tax problems, but the blue sky just kept retreating. And of course there was the great Poseidon bubble of late 1969-early 1970 when the mining company Poseidon NL made a major nickel discovery at Windarra in the Shire of Laverton in Western Australia. Poseidon shares peaked at an intraday high of \$280 in February 1970 and then collapsed. Of course a number of Garrick's investments tanked as well.

We joined Garrick at the same time as we won the contract for the Cape Lambert jetty, which was quite successful and for several years the engineering division ran very profitably. But all the cash we generated went into Shark Bay Salt, Shark Bay Gypsum and other mining ventures.

In 1972 Gough Whitlam came to power. Within a couple of years Australia went into a recession as a result of his disastrous economic policies. As a consequence, the engineering market dried up and the Clough engineering division stopped generating large amounts of cash. Garrick's reaction

was "Get rid of all the engineers and close it down. It's not profitable." That caused a difference of opinion, and so for a few years my aim was to unscramble those eggs.

Finally, in 1977, we sold our 5 per cent interest in Robe River Iron Ore Associates and that gave us enough cash to reorganise, so we ended up with a two-thirds interest in Clough and a one-third interest in the Agnew Group, and the ratios were reversed for Garrick. The big difference was that the engineering group then had its own treasury, and we weren't beholden to Agnew Clough for funds.



Catching record-sized marlin with Garrick

Garrick always had a big boat and after we went into partnership in Agnew Clough he bought Pannawonica, which was named after the iron ore deposit that he'd found. He was also a keen offshore fisherman

and had sailed Pannawonica across to the East Coast and up to Cairns at about the same time as he bought an executive jet. On one occasion I met him in Cairns where he was working for some reason, and he invited me out for a day's fishing trip. We took off from Cairns and were inside the Great Barrier Reef and fished for bait for half an hour or an hour, which was good fun and I caught quite a lot of bait and enjoyed it. Then he took off again and sailed outside the Barrier Reef and into the open sea. There were big swells coming in, but to go trawling for marlin he throttled down to three or four knots, like a fast walk, and so we were rolling around and I got as sick as a dog and was heaving my heart out over the side of the boat, which of course attracted all the fish and the marlin. He hooked a marlin that turned out to be an Australian record. It was a really big fish. My vomit was very good burley apparently. After he'd caught the marlin I said "Fine, let's go home now," and he said "No, I'm going to catch another one," and so we stayed out another hour or two and I vowed and declared I'd never go out on a boat with Garrick again.

Problems with Wundowie

One of the many projects Garrick was involved in was developing a vanadium plant at Wundowie. He'd bought the Wundowie Iron Company from the West Australian government in 1974 to convert it to a vanadium processing plant, but when it was commissioned it didn't work and so we had to mothball it in 1982. He had borrowed \$5 million from the Japanese buyer, Nippon Steel, which I remember he bought in American dollars when the Australian dollar was about \$1.50. The Australian currency kept depreciating and the \$5 million debt increased to \$10

million. I knew that if we defaulted, which we did, they could change the currency, which they did, and they changed it to the Japanese yen, which had kept appreciating and the \$10 million debt had increased to \$15 million by the time Garrick died in 1987. On top of that, he had personally guaranteed it, which meant managing his estate was very difficult – and I was an executor of his estate.



Garrick Agnew, back right, with his record marlin

Robe River Iron Ore Associates – early 1970s

Cleveland Cliffs, an American company, put Cliffs Robe River Iron Ore Associates together in 1969. They had a 30 per cent share, Mitsui had a 35 per cent share, Robe River Limited had 30 per cent, and Mount Enid Iron Ore, Garrick's entity, had 5 per cent, which it acquired when it put in the Pannawonica leases that Garrick had pegged. The Robe River board meetings

were the most interesting meetings I've ever been to. Bill Donnell represented Cleveland Cliffs, Alan Bond represented himself, and Garrick and I would attend after we formed our joint company, Agnew Clough. At the first meeting Bill said he'd like to name the company Cleveland Cliff Robe River & Associates. The Japanese said they wanted it to be called Mitsui Robe River & Associates, and we said we wanted it to be Agnew Clough Robe River & Associates. So we all agreed to keep it simple and call it Robe River Iron Ore Associates, RRIOA.

Bill Donnell used to be called Shark's Tooth. He was like a shark. He had great big teeth and a mind like a steel trap. He'd spent 10 years of his life studying Robe River and he knew everything about it. I recall that I wanted to visit the site and take up some visitors, so I called the site and said "I'm coming up. Can you arrange it?" "Have you got permission?" they responded. "You can't go unless Bill Donnell has approved it." There wasn't a thing that happened at Robe River that Bill Donnell didn't know about. He believed he could co-operate with the Unions, but the Unions just ran him ragged.

Company meetings were fascinating because Bill Donnell and Alan Bond clashed with each other. Under the joint venture, by a quirk of Australian taxation, the four companies each had to be involved in selling their own ore. Before we started, we all came to an agreement that we'd give our rights to Mitsui and they would sell all the ore. When Bond joined and saw he had the right to sell his 30 per cent of the ore, he decided he'd like to swan around the iron ore mills of Europe to sell his iron ore from Robe River.

Bill and Bond were just about fighting each other. Bondy was always querying everything, and Bill knew a hundred times more than Bond did and continued to make a fool of him, but Bondy just bounced back and was equally aggressive.

At every meeting Bill would ask the Mitsui sales representative to give a report on sales and marketing. After the marketing report, Bill inevitably got tucked into Mitsui and effectively kept Mitsui in their place, but he had no chance of keeping Bondy in his. At one meeting, Bill brought a QC along, the top QC in Western Australia, and he sat through the meeting. and when Bondy brought up a point of order, the QC would give his view. The Japanese sales representative subsequently became the President and then the Chairman of Mitsui and got an AO for his contribution to the Australian iron ore industry.

Robe River was a marginal operation for many years. It just kept losing money, and after five years or so Agnew Clough sold its interest in Robe River Iron Ore Associates to a Japanese steel mill, Nippon Steel.

Before that though, the Harbourworks Clough joint venture won the contract to design and build the Cape Lambert jetty for RRIOA. The jetty was 2½ kilometres out to sea and everyone said it wouldn't work, but it did. It was our first major lump sum turnkey design and construct contract. It took two and a half years, and we completed it in December 1972. Its contract value was \$26.6 million.

No women were allowed on the site. We had 400-500 men and they used to drink all afternoon and then collapse in their bunks. Just after I arrived they decided that they'd bring in a subcontractor to

make the meals, and suddenly there were half a dozen women on site. I've never seen such a spectacular change in all my life. Suddenly all the men were clean-shaven and had their hair done and went to bed after dinner.

Lang Hancock – 1970s

I always liked Lang. He was an old rogue, but he had a lot of very good qualities. What I liked about him was that he genuinely ploughed all the money he got back into exploration. We were his 'honorary engineering consultants', and did engineering work on a downhill railway for his mine to his port site and other stuff. We did a lot of work for him and never got paid. He was a station owner and they're all tight. They had to be.

Lang had a famous sheep station, Mulga Downs, about 30 kilometres from the Wittenoom Gorge, and was also an amateur geologist. He found blue asbestos near his station in 1936, and started mining it with Peter Wright. They sold their interest to CSR in 1943, as did WA Goldfields entrepreneur Claude de Bernales, who had bought Izzy Walters and his partner Walter Leonard's blue asbestos mining company.

I met Lang through Marg's aunt, Thelma Jolley, who was married to Izzy Walters. Izzy and Lang were mining blue asbestos in Wittenoom, and they were equal partners in another company too. Izzy was a great guy and very smart. I remember we used to visit him and Thelma and talk for hours. He came out here from Wales and made a fortune importing and erecting prefabricated steel buildings from England. He died over a period of a week or two of asbestosis, not long after Marg and I got back from America. If Izzy had lived, as he

should have, he would have been in Peter Wright's position as Lang only hooked up with Wright after Izzy died. He would have ended up as rich as Lang.

Lang was never very confident about business, which was why he liked Peter Wright. Both Izzy and Peter Wright were much more business savvy than Lang was, and he understood that and felt comfortable with them.

Iron ore wasn't even mentioned in those days. The iron ore mines started in the mid-1960s. Before then the government thought that Australia was so short of iron ore that it couldn't be exported! I recall somebody had iron ore down south in Albany and they wanted to build a magnetite plant. The government liked the idea, but it didn't proceed because we weren't allowed to peg or export iron ore as we had so little of it that it all had to go to BHP who was mining it at Coolan Island.

Lang of course realised that he had a lot of iron ore on his sheep station at Wittenoom. On one occasion he was flying around his station, navigating by sight, and the clouds were so thick that he couldn't see. He kept going down into the gorges and flying through the ravines, and saw iron ore on either side.

In the 1970s Lang took me up in his plane and we flew over all his iron ore and other deposits. In many ways he was a great prospector. At that stage we held 5 per cent of the Robe River Iron Ore consortium in Agnew Clough Limited, which later got bought out by Rio Tinto.

Lang's first wife, Hope, was lovely. His second wife, Rose, was good for him in his last couple of years. She dyed his hair and

did that sort of thing, but she genuinely looked after him. I remember we had a dinner with Lang and Rose and Joh Bjelke Petersen, the former Queensland premier, was there.

Lang wanted me to be trustee of his will. It was after he'd married Rose, and Gina, his only child, was being difficult. She wouldn't talk to him or let him see his grandchildren. I said to Lang "Being trustee is a poisonous chalice. In any case, if I am going to be trustee I've got to read your will and we've got to sit down and I've got to understand exactly what you want me to do." His lawyers were horrified. They were a company out of Melbourne who were robbing him blind. They point blank refused. I told Lang "I've got a problem here." When Lang talked to the lawyers, they said they wouldn't continue if I were trustee. I was involved in some way though, because I recall that I had to sign a hell of a lot of documents to get out of it later.

When Lang died in 1992, the whole of his estate was a complete mess. Lang knew where some of the best ore was and with Rio Tinto staked a number of temporary reserve claims. Separately Rio had discovered the Mount Tom Price high-grade ore body outside Lang and Wright's temporary reserves. Despite this Rio Tinto agreed to include it in the area from which Hancock and Wright earned a 2.5 per cent royalty stream, a decision they tried numerous times to get out of in the decades that followed.

Lang also did another deal with Stan Perron, which was just a note on the back of a napkin. Back in 1964, Lang needed £500, an inconsequentially small amount in today's terms, but he needed it in a hurry. So Stan Perron invested £500 in



Lang Hancock and Harold



1980 Hon. Barry Mackinnon, Minister for Industrial Development, Hon. David Wordsworth, Minister for Transport, Mr Don Aitken, Commissioner for Main Roads, Harold, and Sir Charles Court, Premier

Lang and Peter Wright's iron ore venture, and in return received 15 per cent of their royalties from the Mount Tom Price mines.

They're still arguing over the mining royalties today, with Stan taking Gina to court over money he thinks he's owed from the sale of iron ore deposits out of a Rio Tinto mine near Tom Price.

Even when iron ore exports took off in the 1960s, it was still a very risky, marginal game.

Oil, gas, beer and bridges – 1970s!

In the early 1970s we bought a company in Queensland and renamed it Pioneer Clough. We carried out some road construction and stripping overburden for coal mines, but it quickly became obvious that we were losing money. Our fortunes changed when we won two pipeline contracts around Gladstone, one to carry water and the other a slurry to move limestone. Then we built a weir and the Tarong Pipeline, which ended up being very lucrative. The profits from this contract enabled us to buy Petrosea, a Singapore-based company. We also undertook oil and gas pipelines for Delhi and Santos and did other work in South Australia and PNG.

In 1974 we finished the Stirling Bridge, which spans the Swan River as it enters Fremantle Harbour and cost \$2.6 million. Then, in 1979, we started the Mount Henry Bridge over the Canning River at a cost of \$10.4 million.

In 1975, in association with Kaiser and a Canadian brewery consultant, we won the tender for a new brewery and water tower at Canning Vale, Perth, for Bond's Swan

Brewery, which Don Young worked on. Later we did the brewery expansion. The contract value on its completion in 1980 was \$80 million.

Mount Street and Len Buckeridge, 1971

In our early years we operated from the house in Malcolm Street, Perth, until we bought the place next door at 22 Mount Street, which we developed in 1971/2 in partnership with Len Buckeridge, his father and a firm of accountants. The new six-storey office building cost \$1.37 million. We were supposed to be in a 50/50 partnership, but by the time it was finished we had a quarter interest, which subsequently increased to a half share. The old house we'd rented previously was redeveloped as a hotel.

I went to Len several years later and said "I'd like out. We'd like to buy your share or you buy our share." He said "Sure, the price is \$5 million if I'm a buyer and \$10 million if I'm a seller." And I said "Len, the day will come when you'll want to get out of this, and you've just laid down the terms."

Len had the place next door and completely illegally connected the two buildings on separate titles together. He just knocked a hole in the walls.

Working in Nigeria and with Michael Kailis, 1975

In about 1975 Nigeria sent a trade delegation to Perth as part of their government's 'Feed the Nation' program. They looked at two things: dry land farming and prawn fishing. Part of the delegation worked with the Department of Agriculture on dry land farming, while

another part of the delegation went to see the Fisheries Department, who took them to meet Michael Kailis who was a major prawn fisherman. The Nigerians wanted a factory to process both wet fish and prawns, which they would export at a profit. There is no market for wet fish here, but in Nigeria they eat everything because they are short of protein.

The Department of Agriculture brought Clough Ltd in to give them the technical support required to build a dry land farm in Nigeria.

We put together two proposals:

- Prawns and fish, with a payback of six months, which was very attractive
- Set up an Australian sheep station and grow sheep for meat. Whereas in Nigeria at that time all sheep were herded by shepherds, in Australia we put up fences which enabled us to feed the sheep on poorer grass and save the good grass for summer when there's nothing else to eat. This was never going to be profitable.

We submitted both proposals and were asked to go to Nigeria. I was scheduled to fly with Michael Kailis, first to Uganda and then on to Nigeria. The plane was due to leave at 1300 hours, but I read it as 3pm and I was just leaving for the airport when Michael's wife, Patricia, called to see where I was and told me that the plane was boarding. I missed that plane, but they got me on another flight to Cairo and then I flew down to Uganda to meet Michael.

I recall that Nigeria was having a festival for indigenous people, so there were teams of performers from 10 to 15 different countries including Australia, all flying from

Uganda to Nigeria. They were bringing all their props with them so there was much more luggage than usual and when I got to Uganda, where Michael Kailis joined me for the flight to Nigeria, he was told that he couldn't take his luggage with him. He grabbed a few things and I remember the luggage handlers arguing about who was going to take what from the luggage he had to leave behind. As a result we were late and landed in Lagos at 2am, me with my luggage and Michael without any.

We got a taxi to the hotel. On the highway going into the city we came to a railway level crossing just as the boom gate was coming down. There were three lanes going both ways, six lanes in total, but when we stopped at the boom gate, the cars all overtook so they formed six lines of traffic facing six lines of traffic. We were told that in the preceding month the traffic rules had been changed. Instead of driving on the left, they were going to drive on the right, as nearly everywhere in Africa was going to the right. Obviously, it was a big change so they decided to bring it in over two periods, so the cars changed one week and the buses and trucks changed the following week! Nothing ever moved in Lagos, so it didn't make much difference. It would take six hours to get from one side of the city to the other. It was chaos.

When we finally arrived at the hotel they had given our rooms to someone else because we hadn't arrived on time, and it was busy because of the festival. When we asked if we could sleep somewhere in the hotel or should find other accommodation, they said neither were possible and suggested we sleep in the street. We rang John McCarthy, the Australian Trade Commissioner. A phone call would normally have taken three or four

hours, but it didn't take too long at 2am. John McCarthy invited us to sleep at his residence, and for that we were extremely grateful. I subsequently wrote a letter to the Secretary of Trade, John Stone, and gave John McCarthy such a boost that he became the top man in the Department.

We spent the next few days meeting with representatives of the relevant departments. The prawns had a payback of six months and the sheep station was never going to be profitable, but what we hadn't allowed for was that the sheep station was to be built in the northern province of Katsina, which is on the southern edge of the Sahara where there was an election, and the governor of the province wanted to announce this new project, which was going to keep everyone in meat! They didn't accept the prawn project.

We worked there for 12 months in 1977/8, and built an Australian sheep station for \$2.261 million. It was amazing, driving through the semi-desert and suddenly coming across an Australian farm with shearing sheds and windmills and fences – we ran it for two or three years, and then the Nigerians took over and pulled up all the fences!

They paid us for a while, but at the end they still owed us \$200,000 and we could never get it out of the country. It is still sitting in our bank account there, but they will not allow us to export it. Ian Griffiths went over to start something else and I suggested that he draw down on the \$200,000 we had there, but the bank made it too difficult.

Michael Kailis was a great partner and a great travelling companion, always full of enthusiasm and ideas. There was never a dull moment.

Saudi Arabia 1976-1984

We worked in the Middle East, mainly Saudi Arabia, from 1976 to 1984. We never made big profits, but it kept the company active through quiet times in Australia. In the mid-1970s, oil prices boomed five-fold to about US\$10 a barrel. Saudi Arabia was making so much money that its problem was how fast it could spend it and how rapidly it could import the goods and equipment it needed to improve its standard of living.

When I first went to Saudi in 1975 or 1976, between 150 and 200 ships were anchored in the port of Damman, waiting to be unloaded. A lot of work needed to be done to make the ports more efficient and able to cope with the flood of imports, but it was difficult to unload the materials and equipment to improve the ports – a vicious circle. At that time, you couldn't get a seat on a plane or a bed in a hotel there, and the phone system was hopelessly overloaded. It wasn't hard to get contracts, but it was hard to complete them because you couldn't get labour or materials.

We formed a joint venture with Hassan Al Karim Algahtani, called Algahtani Clough Contractors Limited. Although we never made a lot of money, most of our European partners scooped up hundreds of millions of dollars. We were right on the fringes: we always got enough work to pay the rent and keep us well fed, but we could never land those very big contracts, which in most cases were also the most profitable ones.

09

THE CHALLENGING YEARS – 1980s



In the early 1980s we completed some good projects, including the berthing facility at Port Bonython, followed by work on the Harriet Oil Field. Around this time the oil price dropped from a high of \$37 to \$29, so the last couple of years in Saudi Arabia were disastrous and we lost our shirt. We unwisely hung on because there were always projects still going ahead and we thought if we could win this one next month, or that one, we could recover, but it didn't work that way. Finally, in 1984, we bit the bullet and withdrew from Saudi Arabia – the same year we bought Petrosea.

Stony Point Liquids Jetty and Sue Wager, 1982

In 1982 we did the Stony Point Liquids Jetty in South Australia for Santos (South Australia Northern Territory Oil Search) in a \$30 million joint venture with Harbourworks. Sue Murphy, then called Sue Wager, was in charge of the design, fabrication and erection of the steelwork, which was a major contract

and being fabricated by a steel company in Whyalla in South Australia. She had been corresponding with this steel fabricator for some months as “S. Wager, Engineer”. When the time came to sign the contract, she went across to Whyalla and fronted up at the steel company and they were amazed at this ‘girl’, who had designed the project and knew more about it than anyone, being 28 or perhaps younger, and signing up a multi-million dollar contract. She finished up getting a 10 per cent reduction in the price. The owner rang me up in a rage and said “We already had a too competitive price. She’s a menace, but so much smarter than we are!”

North Rankin ‘A’ Trunkline and ETPM

Around 1982 we also constructed the trunk line from the North Rankin ‘A’ Platform to the Burrup Peninsula, which was valued at \$150 million and was our first major thrust into offshore oil and gas work. The trunk line was to carry gas and condensate from



A young Sue Wager on site



Laying and plough burying of the the North Rankin Submarine gas pipeline Trunkline, 1983

the Platform to processing facilities ashore, and was the first submarine pipeline for Woodside from the North Rankin field into Dampier.

The contract was a joint venture with the French company, Enterprise Trevoise Sub Maritime (ETPM) – literally ‘Enterprise work under water’.

After working with them for a while we gave them our own name: we gave them our own name, Easy Time Plenty Money.

I went to Paris to talk to the boss. He decided that they must have an Australian project manager and he wanted Albert Scott; I think it was something that the Woodside partners got him to agree to. “Let’s ask him,” I suggested. Paris was eight hours behind Perth and when I called when it was about 7.30 in the morning in Perth and there was someone in the office. I said “I want to speak to Albert Scott,” and they responded “It’s 7.30 in the morning and no one’s here.” I said “You haven’t tried Albert Scott’s phone. You’ll find that Albert Scott’s there,” because I knew that he always used to come in early. And he was. And so I asked him and he said sure.

We were laying this very large 40-inch-diameter steel pipeline on the seabed and then we had to bury it under the seabed. Woodside had built a giant plough, which dug up the ground and turned it over either side, and the lay barge laid the pipe in the trench behind it. When you’re laying pipe with a lay barge you have to coordinate eight anchors, two from the bow going forward, two from the stern going aft and two from the forward and aft going either side. As the barge moves forward laying its pipe, you’re constantly picking up anchors and laying ahead, and for that you

have several anchor barges continually picking up anchors and placing them ahead while the barges move forward and lay the pipe behind them. The pipe was in 40-foot lengths, about 12 metres, and we double joined them on the shore, taking them from 12 to 24 metres. The double joints were towed out to the barge and lifted onto it, so as the barge went forward lifting the pipe the joints were welded, and it’s always a balance between wanting the pipe to have a high tensile strength and at the same time wanting it to be flexible.

We had to heat the pipe before we welded it. The pipe was also weight-coated: it had two inches of concrete encasing it on the outside so that it would sink, and so when you formed the joint you first had to heat it, bring them together, weld them together and weight-coat the joint before it could go down the aft ‘stinger’ as it was called, the steel truss which guided it down from the back of the barge.

When the pipe came off the end of the stinger at the back of the barge, it had to go down to the seabed. To allow it to do that without bending and breaking, you had to keep the tension on the pipe. If you lost the tension, the pipe would bend and buckle. There were two types of buckle: a dry buckle and a wet buckle. A wet buckle meant the pipe filled with water, which was hard to fix. You had lots of winches to make sure the barge maintained the correct position. You had to teach the operators how to set it up, and so we had a small model. I tried it for hours and all I got was wet buckles all the time. It was a very sophisticated operation. We went about 100 kms in water depths up to 60-80 feet, or 20-30 metres.



Harriet A Field Development

Albert Scott oversaw the project, which was on a very large scale and he ran it particularly well. A lay barge of that size is able to lay about two kilometres a day, and we based our bid on this. When we first started, we were laying 200 metres a day, and that was our headache. We had 500 people working on the project, 400 of them on the big lay barge that cost us \$300,000 a day or over \$200 a minute. So we had a huge problem: how to get more pipe laid per day.

Albert introduced a bonus system, where the barge operators got a bonus if more than a certain number of metres of pipe were laid per week, and that really raised productivity. In the words of one of the union representatives “it was like sprinkling gold dust in the air.” The whole thing took off at a hell of a rate, so we finished ahead

of time, which was a big saving because of the cost of the ‘spread’ (lay barge, 6-8 tugs and all the support equipment).

It certainly introduced Clough to the offshore oil and gas industry, which subsequently became our main business. Murray & Roberts took us over because of our offshore oil and gas business. The offshore people are a different breed completely from the onshore people – it’s a very elite club.

We continued our joint venture with ETPM, so we also bid for the land pipeline from Dampier to Perth, but were beaten by a company from Korea that made sandals of all sorts, and had persuaded Ray O’Conner, the then Premier, that they would build industries in Western Australia if they got the contract. They had no idea how to do

it and so they engaged a company from Sweden to do it for them. The Koreans pocketed a lot of money and we missed out.

Harriet Oilfield and Challis

Then, in a joint venture with Bechtel we designed and built an offshore platform, pipeline, wharfs and other facilities for the Harriet Oilfield which had been bought by Bond Petroleum. Bondy needed the cash flow, so only gave us 12 months to complete the project, which we did.

We later did a joint venture with Stena on BHP's Petroleum's Challis field: a 4,500-tonne riser: a giant tower that sat on the seabed to which tankers could be moored. This was finished in 1994.

Buying Petrosea 1984

I used to go to Saudi Arabia every month or two and would always go through Singapore, so I saw Bob Elliot quite frequently. Bob Elliot had been a year ahead of me at university and was a good friend. We'd have a meal and talk about what we were doing. He was running a company for Thiess in Singapore called Petrosea, and working in Indonesia, Malaysia and Hong Kong.

In early 1980 I had a call from Bob Elliot to say that a company, Colonial Sugar Refinery (CSR), which had gone into the coal business in Queensland, was taking over Thiess, which was a contractor like us and had a lot of coal concessions. CSR wanted to transfer Thiess's coal concessions into their name and divest



Harold in Indonesia

1986 Harold and Peter Knight, Indonesia



the contracting operations, so they sold Thiess Construction to a German company, Hochtief, who at that stage owned a 50 per cent interest in Leightons, and instructed Leightons to take over Thiess. I knew the boss of Leightons very well and he confided in me what a dilemma he was in, because Thiess and Leightons were very similar and by putting them together he thought they were only going to be 1-½ times as big. He said he was going to keep them separate and have them bid against each other. I told him the clients would never accept it, but they did, and they subsequently bought John Holland and the three of them used to bid against each other, which was quite bizarre.

Hochtief told Leightons they had to take Thiess but Leightons refused to take the overseas operations, so PT

Petrosea remained in CSR and sat rather uncomfortably in that organisation. At that time CSR was a very diverse conglomerate and was successfully tin mining in Banka Island. They had acquired the tin mining operations by default, and they proved a bonanza.

We acquired PT Petrosea in 1984 for about US\$12 million, on favourable terms and funded from the final payout from the successful Tarong Pipeline contract in Queensland.

I was very proud of myself. I reckoned I'd bought Petrosea in the worst part of the recession and we would benefit from the recovery, but I was completely wrong because it took a long time for the company to begin to pay us back. The Board was persuaded to buy it because

Peter Knight had volunteered to go to Singapore to run it if we were successful. Without a doubt the single most important thing about acquiring a company like that is the resources that you are prepared and able to put into it.

As it turned out, 1985, 1986 and 1987 were all disastrous years. We lost money in Australia; we lost money in Asia; we lost money everywhere. If I could have given the whole thing away for two bob at that stage, I would have. But, as always happens when things are going as badly as that, you can't give it away. Nobody wants it so, because we really had no option, we soldiered on. During those three years Petrosea just ate up our best people, our best plant, all our money and all our resources as if it was a bottomless black hole. We just poured resources into it, and really saw nothing in return.

LNG jetty at Burrup Peninsula for Woodside

We were also losing money on a contract to build the LNG Jetty at the Burrup Peninsula for Woodside in partnership with Harbourworks. We bid something like \$60 million for it, and it finished up costing \$120 million. The lowest three bidders were all within a fraction of our \$60 million bid, so we felt our price was right, but as I said, the costs were almost double what we'd estimated.

As always happens there was a whole range of reasons but, because the project was running late, when we were about a third of the way through, Woodside directed us to double our equipment input and work on two fronts instead of one. That largely resulted in doubling the

Woodside LNG Jetty



cost, because most of our costs were in our gear. We did that pretty much on the word of the Woodside Project Manager that he'd look after us, and he did to some extent, but we lost a lot of money – about \$10 million. Westpac supported us when things were at their worst, for which I will be eternally grateful.

We could have easily failed in 1987, which was of course just at the time of the stock market crash too, which didn't help much.

Clive Palmer 1980s

Did I ever tell you why Clive Palmer owes me? In the 1980s, Clive took over a lease of iron ore near the Fortescue River and secured access to 160 billion tonnes of iron ore reserves in the Pilbara region. The area had been explored by an American company, but they'd given it up because there was no haematite ore, just magnetite ore with relatively low iron ore content. The magnetite had an iron content of 38-40 per cent, compared to haematite's 60 per cent, and while the steel companies could get cheap good ore they weren't interested in the lower grade ore.

Clive persisted and got a whole lot of people to do feasibility studies for him, particularly an Italian company that designed steel mills. He needed a port, so Clough did a lot of work on an export port at Cape Preston. He persisted with this and for a long while he got nowhere. During that time Clough racked up \$3 million in engineering expenses, but we were doing it on the basis that if he were successful in developing it we would do the construction work. At one time he came to me and said that he'd like to take over or amalgamate with Clough. I was half interested, but when I put it to the

Clough Board they rejected it out of hand. Nothing happened for a while, and when the iron ore boom took off Clive sold the mining rights to CITIC Pacific, China's biggest steel maker, in an unbelievable deal. He got \$200 million up front and a 10 per cent royalty, and he only sold a third of the deposit. It was an unprecedented deal and that really got him on his way.

When CITIC took over, they brought in Chinese engineers and designed a port 20 times more expensive and 1/10 as efficient as Clough's design was. It's been an unmitigated disaster. They must be disillusioned beyond belief, but have shown themselves incapable of working outside of China.

I hadn't been in touch with Clive for a year or two, when there was a big article in the papers about how he was going to give money to charity when he got his money from CITIC when they started to export ore. I wrote to him and suggested that he give \$1 million to Alzheimer Pty Ltd on the basis that Alzheimer research would be more important to him as he got older. He wrote back saying that the money from CITIC wouldn't be available until they started shipping ore, and that was a couple of years off. So I may write to him again and say that I see CITIC will be exporting ore next month and his royalties will begin to flow and Alzheimer Pty Ltd could do with a couple of million.

PICL late 1980s

About the same time, Dallas Dempster, fresh from building the State's only casino at Burswood, asked us to build Western Australia's first petrochemical plant in joint venture with a Japanese Group, JGC Corporation, for \$600 million. Dempster's

partner in the project was Laurie Connell, who owned the merchant bank Rothwells. Things were going great guns until late 1987, when it became apparent that Rothwells was in financial strife. Dallas Dempster sold the project to Alan Bond and the State Government for \$400 million, \$300 million of which was paid to Connell so he could pay off his debt to Rothwells in an episode that later became known as W.A. Inc. Suddenly the project was getting out of hand. Costs increased to over \$800 million and the project – known as PICL (Petrochemical Industries Corporation Limited) – was suspended and then cancelled only days from beginning the first work on the site at Kwinana.

We had about 100 people working on the project one day, and the next day they had nothing to do. The contract provided for fair compensation, but it's always questionable as to how you measure what that figure should be. I worked with the State Government ministers, and in particular with the then Premier, Peter Dowding, for an amicable outcome. After months of rather difficult negotiations, in one of his last acts as Premier, Peter Dowding authorised a payment of \$20 million to the joint venturers as compensation for the work they had carried out on PICL. Once we had settled, we were over the worst of our financial crisis.

Fortunately, as we were not joint venturers, we were one level removed from the often obscure negotiations which were carried out between Dallas Dempster, Laurie Connell, Alan Bond and the Western Australian Government.

Still, all these events put real pressure on the business and we made an operating loss after tax of almost \$3.1 million in

1987, although we turned this around the following year to an operating profit after tax and extraordinary items of \$3 million.

In 1989 I retired as Managing Director of Clough Limited and Peter Knight took over. I then took on the position of Chairman.

10

GROWTH IN THE 1990s – trouble in the 2000s



Petrosea oversubscription of shares 1990

About the same time, Petrosea started performing more promisingly, and this led to the floating of the company on the Jakarta Stock Exchange in May 1990. This was the coup of all time.

The Jakarta Stock Exchange had been running for 20-odd years, but was largely dormant, because the rules governing the Stock Exchange were such that nobody ever traded. Foreigners weren't allowed to trade stock, and there were all sorts of restrictions on trading shares. In 1989 and 1990 the Singapore, Taiwan and Hong Kong share markets were booming, and the Indonesians realised that those markets were attracting a tremendous

amount of international finance and that Indonesia was missing out on. In order to participate, they freed up a lot of the restrictions on their stock exchange. Some of the rules were that, for instance you had to have five years of audited accounts and that automatically cut out all the Chinese companies, who never had their accounts audited. You also had to have five years of paying taxes, and that cut out most of the Indonesian companies because they never paid taxes. Petrosea did all those things, and so we were able to list.

We listed in May 1990, and with the benefit of hindsight that was at the very peak of the Jakarta stock market boom. We raised the equivalent of about A\$30 million. We were 40 times oversubscribed, and I worked out that the underwriters were holding about



Harold receiving a gift in Indonesia

Harold and Suharto, President of Indonesia



1992 Harold with the Governor of Surabaya



Harold and Jim Gill with the staff of PT Petrosea

1993 Board of Management PT Petrosea, Back row, Richard Reid, Peter Knight, Drs Haji Udaya Sastrodimedjo, Tim Humphry, Lindsay Curtis, Wayne Hartfield, Donal Leonardo
Front row, Don Young, Harold Clough, Drs Ben Mang Reng Say, Bob Browning, Geoff Smith



A\$1.2 billion equivalent in subscriptions. I said to them “Why don’t you let me take all that beautiful money and not disappoint all those keen investors?” Of course it couldn’t work like that, but we did raise the A\$30 million. The stock opened at a significant premium, but once the stock market bubble burst, which it did some time in 1991, the price dropped significantly.

I think that we were the only company that listed around that time that exceeded the projections in the prospectus in both turnover and profit. We performed significantly better than we had predicted, but the market didn’t like us very much, probably because we weren’t very adept at promoting our company.

Pagerungan Island Development – early 1990s

The Pagerungan Island project we undertook in the early 1990s was the biggest project we’d done operating alone rather than as a joint venture. Although it was difficult to see at the time, in some ways it was fortunate that the loss of the PICL project enabled us to shift a large staff to the Pagerungan Project.

The project was to build the onshore facilities for the Pagerungan natural gas project. It was a large gas field in Pagerungan Island, north of Bali in Java, Indonesia. We essentially ran it out of Surabaya, a big city on the east coast of Java. Peter Knight was the Company Manager at that time and Brian Hewitt was his 2IC and he went up to Surabaya to run the Pagerungan Island project. He had great people under him, particularly Rob Jewkes.

We were to design a gas plant to receive the gas, dewater it and take out any undesirable content such as sulphur, etc., and then put it through a pipeline to Surabaya. We designed it and gave the client a quote on what it would cost, which was accepted, but then, fairly shortly afterwards, they wanted to change it rather drastically, so we had to negotiate a revised price. As the client had run out of time to get someone else to undertake the project in the timeframe they were stuck with us, so we charged a lot. At the same time, we delivered very efficiently and came in under our original budget. The client knew that they’d been had, but made a lot of money out of it and so was reluctantly happy. It worked well and it was commissioned on time, even if they paid more for it than if they’d had more time to go and get other companies to bid on it after they had made the changes.

In the engineering and construction business, 90 per cent of the time major changes take place. The only way contractors survive is by charging high prices for extras.

We had to build our own airstrip and town, and provide power and water and other facilities such as phones to the villagers at the other end of the island. That was part of the deal. And we had to bring everything over to this remote island and build a gas plant that received the gas, cleaned it up and put it in a pipeline at high pressure to send to Surabaya. Probably almost half the work was the civil engineering work of the airstrip and jetty to receive the goods, the housing and all the other things apart from the main technical work, which was the gas plant.



Pagerungan Besar Gas Field Development

The collapse of a currency – Indonesia in 1997

I've always liked to keep some physical gold for the day when the Australian currency collapses, because when that happens the banks close their doors. Well, that happened in Indonesia in 1997.

In 1997 there was a collapse of currencies in Asia, and particularly in Indonesia. Their banks had been borrowing US dollars at 1-2 per cent, because the interest on American money was very low, and lending in rupiah at 15-20 per cent. It was a great business. Everybody had borrowed heavily in dollars, but had all their assets in rupiahs, so when the rupiah fell 80 per cent in a matter of months the banks closed their doors. You had Indonesians with millions of rupiah in the bank, and they couldn't buy a loaf of bread.

We were in the wonderful position of having all our contracts in US dollars and all our costs in rupiah. Everybody lost their jobs and we found that most of our Indonesian employees were supporting their entire families. I recall that just before Christmas – when we always used to have a Christmas party and invite them all -- a delegation of our workers came to us and said "We don't want a Christmas party this year, we just want some rice." So we bought a whole lot of rice, which was cheap, and they each took home a couple of bags.

There was a major financial collapse in Australia in the 1990s. This was due to rampant property speculation especially in Melbourne, but it also affected Sydney and to a lesser degree Western Australia and Queensland. As a result, a raft of banks simply closed their doors. Many failed and

a few were 'reconstructed'. If you had gold you were golden, but that was the only thing that had value.

Pakistan

We also undertook some projects in Pakistan in the 1990s, including a gas condensate processing facility for the

Pakistan Oil and Gas Development Corporation in Dhodak, and the Uch Gas Transport Pipeline in Dera Murad Jamali in the Province of Baluchistan. Later on, in 2003, we worked on the Sawan Gas Plant in the Thar Desert in Sindh Province.



Sawan Gas Field Development

I remember John Howard, Prime Minister of Australia at the time, said at a reception hosted by the High Commissioner to Pakistan:

'I am particularly pleased to be associated with a decision of a very esteemed and successful Australian company, Clough Engineering, run I suspect in an indirect way still by a very wonderful Australian businessman, certainly founded by him, Harold Clough, whom I've known for many years and who epitomizes successful Australian businessmen possessed of great commitment to good commercial values and integrity, but somebody who has shown great leadership in his own area. And I would say to our Pakistani friends who are here tonight that the association with the company will be an association that you will not regret.'

BHP was doing 100 times more work than me (chuckling)!

Bunnings

Sometime in the late 1980s or early 90s, I was invited to join the board of Bunnings, which was a major Australian timber company. At this stage the Board consisted of a number of independent directors such as myself, representatives of the Bunning family such as Bob and Gavin, and other representatives the family had placed on the Board such as Ian Mackenzie, the CEO, who was a very smart and unusual fellow, and Mike Goddard, the Director of Finance and Planning. Bunnings was a marginally profitable timber company but the jewel in its crown, its most profitable section, was its woodchip business, which was booming.

Giving staff Clough Ltd shares and subsequent listing – 1990s

In the 1990s the Federal Government changed the Taxation Act, so that it was better to remunerate employees by way of shares than bonus. Prior to that time paying bonuses was more tax effective because, while bonuses were taxed in the recipients' hands, from the company's point of view you got a deduction. The change in the Tax Act, which resulted in giving shares, also meant that employees had a long-term incentive in the company's success.

We'd always had a policy of giving 10 per cent of our profits as bonuses, and so instead of giving bonuses we started giving shares. The senior executives quickly built up a sizable share portfolio until they owned about 20 per cent of the company. They also decided to put their shares into an Engineering Trust because that gave them some advantages, especially because the shares were in one block instead of 40 to 50 individuals, but this caused quite a bit of trouble when we listed.

When we decided to list and talked to the underwriters as to how to value the company, I came to the conclusion that we would be much better off selling the core engineering business as an entity as the underwriters gave virtually no value to non-construction activities such as Wundowie, Carrarang Station and Shark Bay Salt, which was quite a big business in its own right. I decided we'd keep the non-construction activities in McRae Investments, the family company, and just sell the construction business. To do that the Engineering Trust had to agree that I could transfer those activities into McRae from Clough and get a value



12 March 1998, celebrating the listing of Clough at Willy's office, Sue, Willy, Becky, Jane, Macgregor, Ken, Mimi, Marg and Libby

for them. Therefore we had to assign a value to the non-construction activities. Mike Goddard was set that job. I thought his valuation was 50 per cent or more above what they were really worth. For several weeks I nearly called off the listing because we couldn't reach agreement. We never did get agreement, but when I told the underwriters why we weren't able to go ahead they reviewed the value that they'd assigned to the non-construction activities and agreed to lift the valuation of Clough to fully recognise the non-construction assets, which I believed they were heavily discounting or almost ignoring. So then we listed Clough with all its assets intact, but it caused a lot of ill feeling.

By the time we listed, we only owned about 80 per cent of the shares in Clough Ltd, and the staff owned the balance. Prior to listing, staff would get dividends, but when they left they had to sell their shares back to the company. Clough bought the shares back, but we had no way of valuing them. We used to assign them 'net tangible asset' value but we knew that goodwill attached to the shares. When we listed, all the staff were in a position to sell their shares on the market and to realise the full value of the asset. This was one of the advantages of listing.

We listed Clough on the Australian Stock Exchange on 12 March 1998 at a price of 71 cents/share but I'm sure that created a premium on the 'net tangible asset' value of 30-50 per cent, quite a substantial increase in value. I've got the Information Memorandum. When we listed we had to get the necessary 'spread' of shares, so we issued and sold a lot of new shares, and I remember it because I distributed a lot to all our friends and relations. Brian Davies reminded me that I gave some to Ada, his mother and my niece, and she still had them when she died. We gave some to Elmo Spadanuda, our tremendous stonemason, and people like that. I felt like Father Christmas. It was like giving away free paper money, but tremendously appreciated and, strangely enough, most of them never sold the shares but just sat on them. Whereas when we listed Petrosea shares in Indonesia and gave a lot to the Indonesian staff, they virtually without exception immediately sold them, probably because they were much poorer.

At listing, Clough had 21 offices throughout the world, with more than half its work sourced from Asia and a turnover of \$600 million for \$20 million net earnings.

Listing was a logical progression for the Company. It's great being private: you only answer to yourself and you can do as you like. As we got bigger, we gave about 20 per cent of the company to the staff and that became difficult to handle as a private company. A second reason to list was to deal with succession. If you bring your children into the business, in many respects they are on a hiding to nothing. If they do well, it's because the old man gave it all to them and if they do badly, they couldn't even make a go of it.

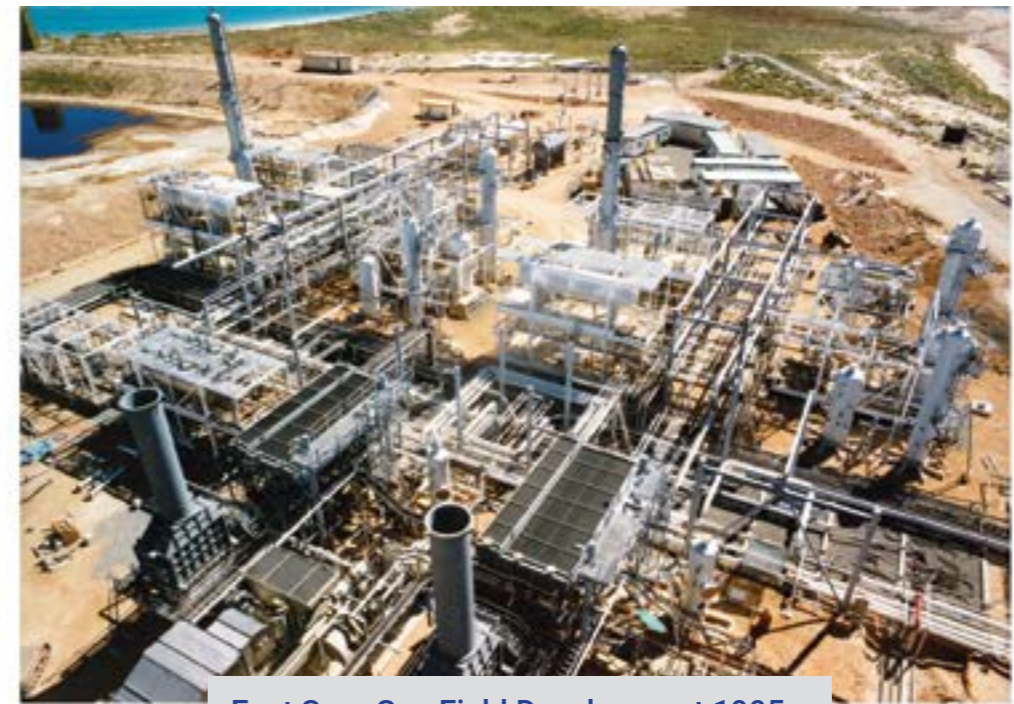
Clough Limited and Clough Engineering restructure – 2000s

We had some great projects in Western Australia and around the world, especially in the growing offshore oil and gas area in the late 1990s and early 2000s, including the Apache East Spar project, the Bayu-Undan natural gas and gas liquids development in the Timor Sea and the Woodside NSW Shelf Train IV expansion. We also did the Graham Farmer Freeway, the AGL Alliance contract and Dalrymple Bay Coal Terminal. Others projects were not so good.

After the significant first half losses in 2002 we reorganised the company, and Jock replaced me as Chairman of Clough Limited when we merged the boards of Clough Limited and Clough Engineering. Brian Hewitt, the Managing Director of Clough Limited also resigned at this time.

We were seeking a new CEO, and Jock decided that we should go to the market to get the best CEO worldwide. David Singleton, who was working for British Aerospace in the UK, was selected and became CEO in 2003. David was a good CEO, but he wasn't a contractor.

Rob Jewkes, CEO of Clough Engineering, who had applied for the position of CEO, left Clough and got a job with Petrofac, which works worldwide in the oil and gas business. He is still working with them, has been very successful and now lives south of London. I see his father, David Jewkes, every week at tennis.



East Spar Gas Field Development 1995



East Spar Gas Field Development (onshore facilities) 1995



Woodside LNG Expansion (Phase IV) 2004

More losses

Between 2003 and 2006 the company posted losses, mainly as a result of BassGas and two poorly performing contracts in the offshore oil and gas business. Jock remained Chairman until the 2006, at which time a \$40 million convertible notes issue was undertaken. At this point Murray & Roberts had 46 per cent of the company and we had 20 per cent.

Then we got into serious financial difficulties with the BassGas contract to build a pipeline, jacket and platform with a gas processing plant in Bass Strait for Origin Energy. Origin had let their lawyers persuade them that if they managed the contract there would be no additional costs, and they did that by asking us to do additional work and then refusing to pay

for it. We were in litigation for years, which made the lawyers very rich and cost both Origin and Clough a fortune. I'd estimate it cost us \$100 million dollars each. It happened when there was a tremendous boom in the construction industry, and we had all our best people tied up in litigation in the knowledge that their lawyers told us that Origin were going to appeal and fight it forever. So we probably lost \$600 or \$700 million in other opportunities. Litigation only finished when we agreed to sell our controlling interest in Clough to Murray & Roberts, a South African company, in 2005. We agreed to sell it in three tranches at whatever the market price was in 2005, 2006 and 2007.

The main reason I got out of the construction industry was that I decided if a client was ever going to hand over the management and control of a contract

to his lawyers and they ran it the way that Origin's lawyers did, which was horrible, then they would inevitably send us bankrupt and I didn't want to be in that industry.

I guess it applies to many contracts, in fact any business contracts where you have a much bigger company dealing with a poorer one, because it quickly comes down to how much each company is prepared to spend in litigation. If you're very rich and can afford it, it's easy to become a litigant and so any small company would be very unwise to enter into a contract with you. Whereas the major mining companies that we were used to working with were extremely honourable. We used to fight a lot, but we were both honourable. Consequently I'm much happier being a miner than a contractor!

When the new CFO decided to fire a number of our long-term employees and told Jock what he was proposing to do, Jock told him to clear it with me. I said "Look, these people have been with us for 20 to 30 years and I'm most disappointed that you want to fire them." He replied "The Company's in trouble and we have to run it our way. I want new people in these positions. Your people aren't up-to-date with the current practices." I reluctantly agreed, because I don't think we could do otherwise.

Two people were told straight away. One was Colin, who was the paymaster and knew everything about everyone in the company. He was the type of person that everyone shared their personal lives with, which I believed was an extremely good practice because you knew there were no phantom employees. The second was called Robertson and was also from the



Woodside Karratha Onshore Gas Plant

finance section. He always impressed me because we had a policy that the company wouldn't pay parking fines. At one stage I was in Melbourne and I had parking fine, but it wasn't labeled 'Parking fine, Department of Transport'. In Melbourne everything went into consolidated revenue so I just included it in my expenses. Robertson rang me up and said, "Harold, you put a parking fine in your expenses and we don't pay those." I knew he wasn't going to let anything go through if he wouldn't let me claim a fine.

Anyway, the CFO saw them both and said, "Close your computer, pack your bags, I want you out in 30 minutes." It was outrageous and they went. What happened next was interesting, because the next day the new people came in and went to work and they found out that to get into the computer that held all the pay records they needed a password, and only Colin knew the passwords because no one else was allowed to look at other people's pay. Colin had been summarily dismissed, and so they came to me and asked me to persuade him, which I did, but I never forgave the CFO. He had no idea how to handle people.

Selling my name

I'd decided that we were better off selling our shares in Clough Ltd than trying to continue, and we and all the other shareholders got a very good deal from Murray & Roberts, who took over the business and delisted it in 2013.

The only regret I had was that I sold my name and it wasn't until I sold my last tranche of shares that I realised I was also selling my name. I rang up the boss

of Murray & Roberts and said "Brian, now you've taken control and you'll change the name to Murray & Roberts, can I get my name back?" He said, "One, we're not going to change the name, and two, you can't have your name back." That was about the only regret I had. I should have been proud, I guess, that he wanted to hang onto my name.

11

LIFE AFTER CLOUGH ENGINEERING AT McRAE INVESTMENTS



Shingles of the eye 2003

When I was in Indonesia in early 2003 I developed a pain in my left eye. I thought it would just go away, but the next day it was just as bad and by the third day it was worse. I was with Mike Henderson and the Australia-Indonesia Institute at the time. Knowing he looked after all the medical problems for the Indonesians, I said "I've got a sore eye. What should I do?" "Get on the next plane back to Perth," he responded. So that's what I did.

Michael rang Ian Constable at the Lions Eye Institute and got me an appointment. He gave me a lot of eye tests and said "There's nothing wrong. You may have a tumor or

a neurological problem," and he booked me an X-ray. I spoke to Mike Henderson about it and he made an appointment for me the next day to see Allan Kermode, a neurologist, who had a look at me and the X-rays and said there was nothing on the X-rays and arranged for me to have an MRI.

On Sunday night the pain got significantly worse. I was up all night, and at about six in the morning I rang John Clarkson, a GP and family friend. "I've got a real problem. I'm getting blisters all over my left cheek and my eyes are running." John said "You've got shingles of the eye. Go straight to an eye doctor," so Marg rang her eye doctor and I went to see him. I was diagnosed

with shingles-herpes zoster ophthalmicus in the left eye and he prescribed stuff, but it was explained to me that if not taken within two days of the first symptoms it's not that effective. That proved to be right. Shingles of the eye is a virus, not bacteria; it can't be treated with an antibiotic, in fact it can't be treated at all. All that can be done is to relieve the pain. So Kermode prescribed medication to block out the pain, which it did, but it also deadened my brain. I couldn't read the paper or even watch and understand television. My brain just didn't function. I then suffered postherpetic neuralgia, which is neuralgia in the brain. That was when Mimi used to come in to see me four times a day to apply eye ointment.

Touching my toes and sequestered disc

The pain diminished very gradually over a couple of months. I was just getting better when I was in a nice hot shower and touching my toes, but I wasn't getting down quite far enough so I bounced a little and sequestered a disc in my back. I went to see Richard Vaughn, who'd given me my first laminectomy, and he recommended I have a second laminectomy operation, which I did. The difference was that after this operation I still had significant back pain and my left leg was paralysed. All the experts had a look, and a couple gave me a sort of nerve torture with something like a cattle prod and concluded the problem wasn't coming from the L3 nerve.

I decided the medical profession was ganging up on me. My left leg was numb from hip to ankle, and I couldn't put any weight on it. I couldn't stand, walk or do anything, and so I was out of action pretty much completely for three or four months,

unable to walk. Movement in my left leg gradually got better, but it was half the size of my right. I've been exercising with my wonderful personal trainer, Marnie Duff, ever since to try to get some strength back into it.

More stents

I was going to see Vaughn regularly and one day, just as I was leaving, I mentioned in passing that I'd had a feeling in my heart the night before and I was going to consult Geoff Mews, my cardiologist, the next day. He said "You're not waiting till tomorrow; you're going in now," so Marg and I drove to Hollywood Hospital and tried to see Mews, but he wasn't available. The registrar ordered an ECG and had a look at it, but said it was all right and not to worry. I was just getting dressed to leave when Mews arrived and they told him what was happening. He said "Come with me." He X-rayed my heart and continued "Stay there. I'm going to put in a couple more stents," so I had two more stents. I've now got six stents in my heart and one in the right iliac and one in the aorta.

The result of the shingles and laminectomy was that I was completely out of action for most of the balance of 2003.

I recall Len Buckeridge calling at our apartment. He was huffing and puffing when he arrived, as he had had to take the stairs because at that time we hadn't installed the elevator. "You look fine," Len grimaced. "I'd heard you were dying," and then he proceeded to tell me how he had clinically died and been brought back to life. He said "As I came to I smelt the hair on my chest burning and, believe me, Hal, I did see my life flash before my eyes, but there was no white light at the end of the tunnel."



Sue, Harold and Michael Henderson

Move to Broadway, Nedlands, in early 2003

When I returned to work at Clough Ltd in December 2003, all the work in which I had been involved had been handed over to other executives and there was no point in my taking on new responsibilities, so I moved to Nedlands and joined Bill at his office at 117 Broadway. Bill was away most of the time and McRae Investments, the family company that had been established on 17 November 1965, was investing in his mining ventures in Brazil, oil ventures in Myanmar, and his recycling and tyre businesses which both needed money.

McRae Investments

Since selling the remainder of our shares in Clough Ltd in 2007, McRae Investments has also been a venture capital company investing money and management in opportunities. Some of our investments like Alzhyme Pty Ltd are partially business and partially charitable donations and some like Davies Wear Plate Systems are to help friends and relations. In these cases we either believe the investment will be profitable, or we simply make a gift and do not participate further.

Brian Davies and Davies Wear Plate Systems

Brian Davies is my cousin Ada's son. He has had a lot of brilliant ideas we've invested in, but none has made any money to date. We currently have a 25% interest in his company, Davies Wear Plates Pty Ltd. We're hoping to sell it for \$20 million to SSAR, a Swedish steel company, that makes hard-ox plate. This would mean that we'd get the \$1 million loan back and make a further \$5 million!

Brian had a brilliant system for storing and recovering steel bars in engineering. You could call up a bar of a certain size, and they'd decide what sort of raw material you needed. Raw material comes in pieces about six metres long, which are what fit in a truck. If you wanted pieces one-metre long you'd cut six out of each bar, but if you wanted pieces of different multiples, then every time you cut a bar you'd get a lot of waste. His computer program juggled them all so that everything was optimised and you got the minimum of waste. But you couldn't sell it.

Green Recycling and Koast Tyres

When I moved to Broadway I started taking an interest in Green Recycling and Koast Tyres Pty Ltd, which, in Bill's absence in Brazil and Myanmar, were being run by Michael Chon and Alby Atkins and were having financial problems.

Perthwaste/Green Recycling

Bill established Green Recycling, a recycling processing business, when he was working with Clough about 1987. In 1990 when Bill left Clough as an executive he acquired the business together with brothers, Michael and Yong Chon. It quickly became apparent to me that Michael Chon was stealing money, and in December 2003 he was dismissed and we arranged for Yong Chon, Michael's brother, to take over the North Korean assets, and Koast Corporation Pty Ltd to take over the Australian assets of Green Recycling and Koast Tyres.

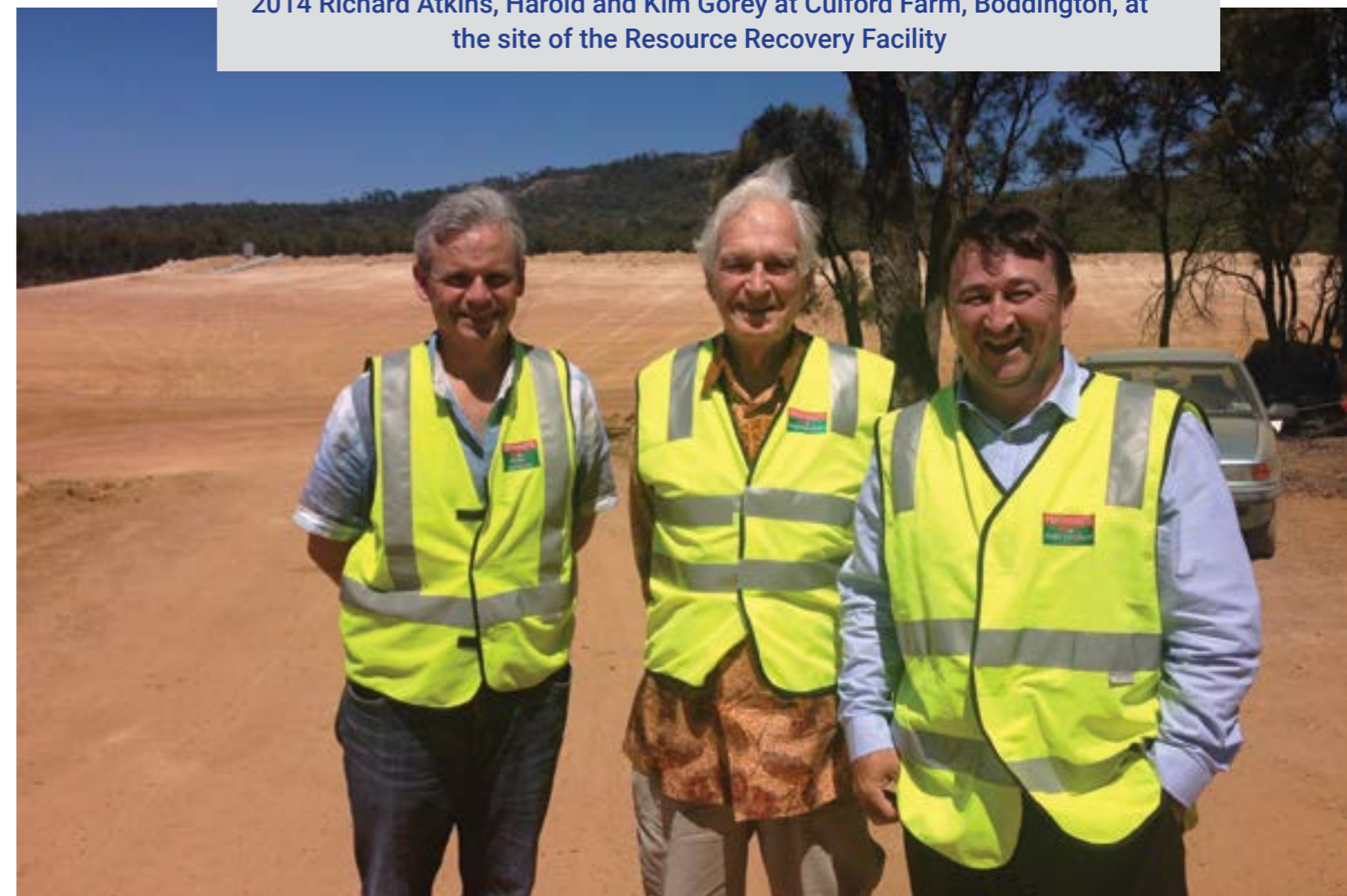
At one point Green Recycling had almost 50 per cent of the verge recycling contracts of the Perth metropolitan area. However in 2003 both Green Recycling and Koast Tyres were in financial crisis. McRae Investments decided they were worth saving and invested money and management to resuscitate them. Bill and Michael Chon had both personally guaranteed the performance of the large Green Recycling contract with the South West Shires, and this had a large influence on our decision. At the same time we agreed with Bill and Yong Chon that McRae take over the ownership of Koast Corporation Pty Ltd.

In 2006 Kim Gorey approached Bill as his business was not able to prequalify for council recycling collection work without an experienced track record. Kim Gorey had

commenced Perthwaste as an offshoot of his turf business in 2001, providing collection services initially to Peppermint Grove Council and subsequently to other metropolitan councils. Subsequently Perthwaste Pty Ltd was incorporated with Gorey and McRae each owning 50 per cent of the company. From that time, although still separate legal entities, Perthwaste and Green Recycling began working together closely, with Kim taking over day-to-day management of Green Recycling. In 2011, Richard Atkins' family trust acquired a 5 per cent interest in Perthwaste Pty Ltd, leaving McRae and Gorey each holding 47.5 per cent.

We all agreed that the future of waste management is immense, and acquired Culford Farm, a property in Boddington, in 2012 to establish a landfill and resource

2014 Richard Atkins, Harold and Kim Gorey at Culford Farm, Boddington, at the site of the Resource Recovery Facility





2015 Mimi Packer with Harold and Kim Gorey signing pre-sale agreement with Suez

recovery facility. The landfill occupies a portion of the land at Culford Farm. Another exciting opportunity lies in the remaining land which, because of its buffer approvals, will be able to accommodate noxious industries, such as pig and chicken farms or tanneries, so-called because of their production or discharge of noxious substances, gasses, smells, noise, smoke and the like.

I believed that the approvals Perthwaste had to develop a landfill at Boddington would result in the landfill receiving 800,000 tonnes of waste/year by 2017

showing a profit of \$50/tonne, which is \$40 million per year.

In April 2016 we all sold our shareholdings to French waste management company Suez for a total of \$87 million. At that time Perthwaste was servicing more than 760,000 people covered by local councils in the Perth metropolitan area and the State's south west, operated 68 rubbish trucks, two materials recovery facilities, an organics composting facility, two waste transfer stations, three depots and a landfill.

The property at 21 Giorgi Road, Picton, where one of the materials recovery facilities was located, is being rented to Suez. McRae continues to pursue opportunities at Culford Farm with regard to noxious industries, now referred to as agribusiness.

Selling Koast Tyres and distribution to grandchildren

In late 2013 Koast Tyres lost the contract with Hankook for distributing tyres in Western Australia. Willy Packer took on the liquidation of the business, winding down its \$6 million tyre inventory. Management had considered buying the stockpile for \$2.5 million, insisting that was all you would get in a fire sale. When they dropped their offer to \$2 million, Willy offered to liquidate and underwrite the business himself. Together with Richard Atkins, he was able to sell the tyres for \$5 million, despite many being past their expiry date. Willy distribute the bulk of the windfall to my 15 grandchildren and some staff, which impressed me a lot.

Koast Tyres was located at 178 Railway Parade, Bassendean. The property, which is just over three hectares, is now leased to Royal Wolf, who store containers there.

Bill's projects – Serabi, Colomi, Twinza and Phnom Penh Post

McRae Investments has made significant investments in some of Bill's other projects including Serabi Gold and Colomi Iron, which are both in Brazil, Twinza Oil, originally largely in Myanmar, but now also operating in PNG and Australia, and the Phnom Penh Post in Cambodia.

Between 2004 and 2006, Bill pegged the Colomi iron ore leases in Brazil, and McRae provided some funding toward the project, which led to a farm-in deal with Vale, Brazil's biggest mining company.

Sometime earlier, before Bill went to Brazil, he had been working with Craig Burton and had promoted the Sally Malay nickel mine in the Kimberleys. At the same time Bill and his team developed a theory as to how coal occurred at Bengkulu in South Sumatra, and persuaded McRae to put up \$200,000 to earn an interest in testing their theory. They talked Dan Madre who was working for PT Petrosea, a Clough Ltd subsidiary, into joining them, bought several drilling rigs and commenced drilling. After a few months it was apparent that there was no coal where they predicted, their theory was wrong and the program was cancelled.

Dan Madre set up PT Danmar Explorindo, drilling for other coal mine owners, and McRae Investments paid him a monthly retainer to explore for minerals on its behalf. Bill advised Dan to look for nickel ore, because he was the first to realise that the economics of nickel processing had changed, that it was no longer essential to set up a processing plant on every deposit, and that nickel ore containing only 1.5-2.0 per cent nickel could be economically transported to a nickel processing plant.

Len Buckeridge and Geoff Mews

Late in 2011, I was coming back on the plane from Jakarta to Perth via Denpasar and sat next to a young fellow with a couple of oldies in front whom I didn't take much notice of. Then Geoff Mews, my cardiologist, stood up. "What are you doing in Indonesia?" I asked. Then Len Buckeridge stood up and said "G'day." I was sitting next to Len's son! We changed seats and Len sat next to me and kept me entertained the whole way back to Perth. Len talked about what he was doing in Indonesia: he was looking for a coal mine to support his clinker operations there and so he needed cheap coal.

Geoff Mews was flying with Len as his personal physician and cardiologist. Len and I vied over how many stents we had.

Long Ikis, Kolonodale and Bengkulu

When Bill had worked at Clough he had been approached by owners of a laterite nickel project at Long Ikis in Kalimantan. In August 2005, PT Danmar Explorindo commenced exploration at Long Ikis in South Kalimantan and confirmed the presence of nickel ore. Mine operations commenced in early 2007, and the first shipment of ore was made in May 2007.

While this was happening, Dan Madre continued exploration, and found and pegged a large nickel deposit in Kolonodale in Sulawesi, and McRae spent several million dollars drilling the deposit, buying the necessary land, designing the port, etc. Dan Madre also returned to Bengkulu and the coal leases that had been drilled unsuccessfully previously, found coal and pegged four leases.

Following the nickel price crash in September 2008, we sold our last cargo from Long Ikis in December 2008 for US\$9,000 per tonne. Our first cargo had sold at the peak of the market at US\$54,000 per tonne. We mothballed the Long Ikis plant and, in early 2009, moved our plant and people to Bengkulu on the southwest coast of Sumatra and opened up a new coal mine. We sold our first coal cargo from Bengkulu on 10 April 2009.

We had major management problems at Bengkulu and changed managers several times. In 2013 we had about 350 Indonesians and half a dozen expatriates working for us in Indonesia.

I always felt that Bengkulu promised to be a very exciting development and a tremendous bonanza, providing we didn't blink too early and give up.

In June 2013 the decision was made to close the mine, due to two factors: firstly, the 35 per cent fall in the coal price made the operation marginal, and secondly the new mining act made it very difficult for foreign operators. I set a record in Indonesia: I lost \$1 million a month for five years (said with the trademark twinkle in his eye)!

Bullsbrook development in 2013

Looking at the assets of McRae Investments, I've come to the conclusion that the biggest asset, by quite a margin, is the land at Bullsbrook, although it has developed very differently to how we first expected. In the rural residential development there are 219 lots that we would expect to sell over 5-10 years at \$350k/lot, which should gross \$76 million.

The urban developments on the land facing the Great Northern Highway, will be a much more intensive development and probably 10 times larger than the rural residential. They could gross \$760 million and would probably stretch over the next 20 years. McRae effectively has a 47.5 per cent interest in both these developments. The other interests in the rural residential development are owned by Humphrey and Esme Parkes with whom we've been involved in a 52.5 per cent/47.5 per cent partnership for many years, and Jock Clough (as Clough Nominees) as Trustee for the Clough Family Trust, which owns about one-third of the rural residential. The urban development is owned by Parkes/McRae and Time Valley, which is 50/50 McRae and Marlin Bullsbrook, which is owned by Michael and Ben Rasheed.



Josie and Ryan, Tannamurra, Bullsbrook, April 2016



Harold at Bullsbrook in 2016

THE CLOUGH SCHOLARSHIP AND UWA

Clough Scholarship

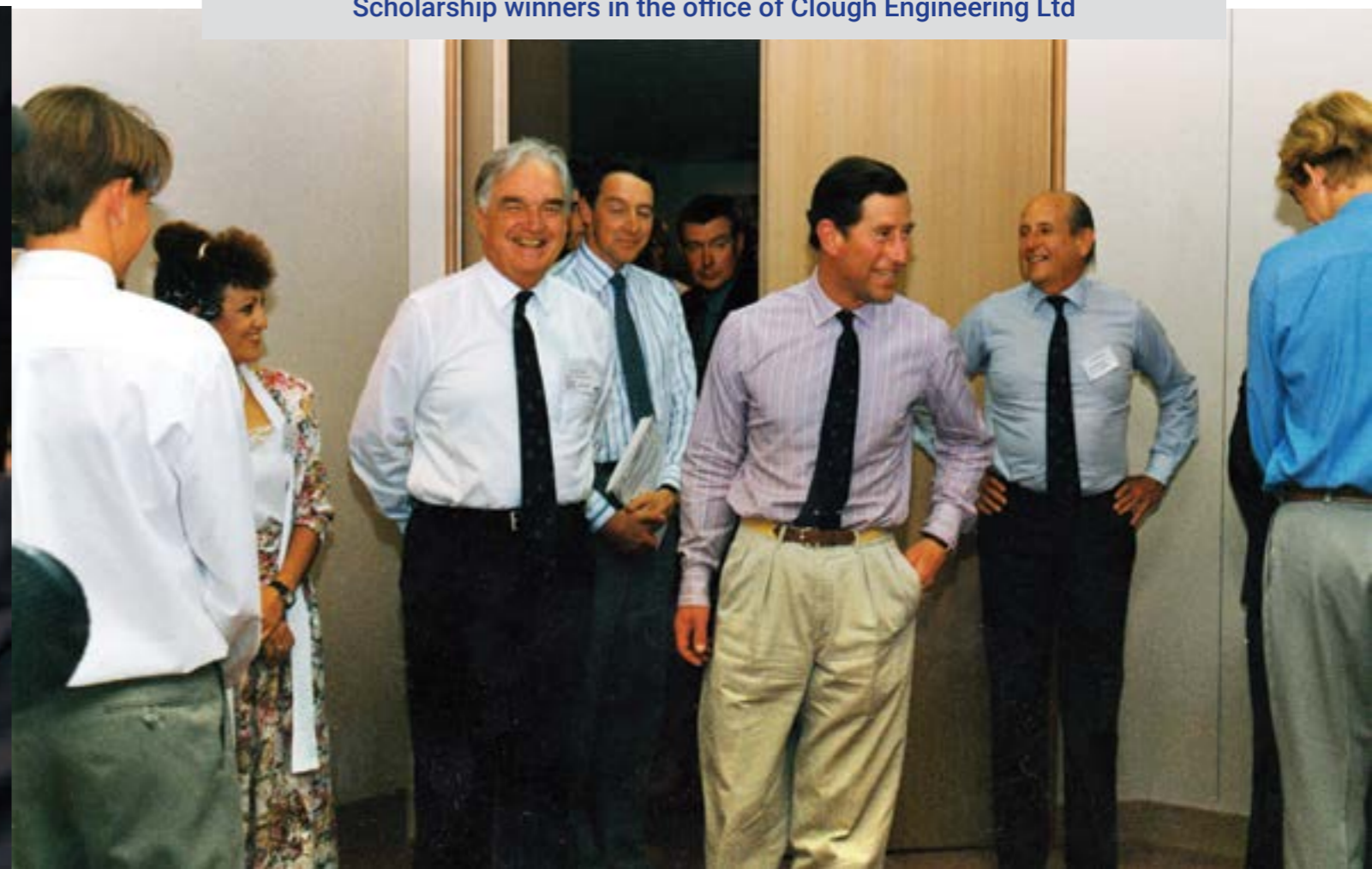
Over 45 years ago, in 1972, we thought a scholarship at UWA would be a good way to foster relationships with the top engineering students. Unlike a similar scholarship developed by the State Government, Clough scholarship recipients weren't under any obligation to work for Clough Ltd once they graduated.

I am sure it was one of the best things we ever did. What you realise in business is that the quality of people is the all-important thing. If you have good people you can do anything. You need money, you need plant and equipment and headquarters, but I would exchange all of those for a good team.

When we were excluded from large projects for lack of experience or financial capacity, we formed joint ventures with the biggest and best of our international competitors. Working alongside their peers from the world's leading companies gave our people great confidence to see they were as good or better.

To win a Clough scholarship you needed to be the cream of the cream, and I believe the credit for the success and growth of our company goes in no small part to the contribution of our scholarship winners.

1994 Harold and Prince Charles when Prince Charles presented the Clough Scholarship winners in the office of Clough Engineering Ltd





1994 Prince Charles and Harold on St George's Terrace

When I look back to see how we fared, a little over 50 per cent of scholarship recipients joined us at Clough. And when they didn't join us, they would go and work for one of our clients where they were even more valuable. It is amazing the positions the more mature recipients have achieved. They are now senior executives in major companies all over the world.

Since 1972, Clough Engineering has awarded 140 scholarships, mainly to UWA students, and another swag to Indonesia. In 2010 we held our first Clough Circle dinners, where recipients of the scholarship were welcomed back to UWA. Some travelled from halfway across the world. Lindsay Curtis spoke at the first reunion in 2010, Sue Murphy, who is CEO of the Water Corporation, spoke in 2011, and Tri Suseno spoke this year.

Excerpt from Sue Murphy's speech in 2011:

But what I really learned was leadership. Clough in those days was a place where anyone with an idea was encouraged to run with it, where young engineers were given ludicrous levels of responsibility and where we all behaved as if it were our own business.

We worked hard – I remember coming home on R & R from sites and sleeping through rock concerts because I was so tired – but we played hard too. And we were fiercely proud of what we were achieving. I remember jobs which felt as if they were going off the rails – you'd go and see Harold and he would say "You smart young guys always come up with the solutions." You'd think, well it's his money and he doesn't seem worried, and then you'd work all hours to fix it so you wouldn't let him down! Harold has always personified every HR buzzword, empowerment, mentoring, succession planning, staff development, but the fact that he would gag on saying it in those terms was what made it so powerful.

It was simple; if you were passionate about something and showed it could make money, then do it. Harold's trust and faith in each of us was greater motivation than any salary or bonus could ever be. I honestly thought that the Clough culture was normal and it was only later, looking back on those times, that I realise what a special person he is. Spud always said I was the stupidest person in Australia because I worked at Clough for 25 years and only realised then that I was an employee. Everyone around me did the same. Harold achieved that ultimate leadership goal of having us all committed, aligned and passionate about achieving something better for the company every project, every day and every set of results."



Sue Murphy



2014 Harold, Jean Perron and Kevin Gallagher, Clough CEO, at a Clough Scholar Alumni Dinner

2014 UWA Business School event with supporters Harold, Jean and Stan Perron bottom left



UWA Senate

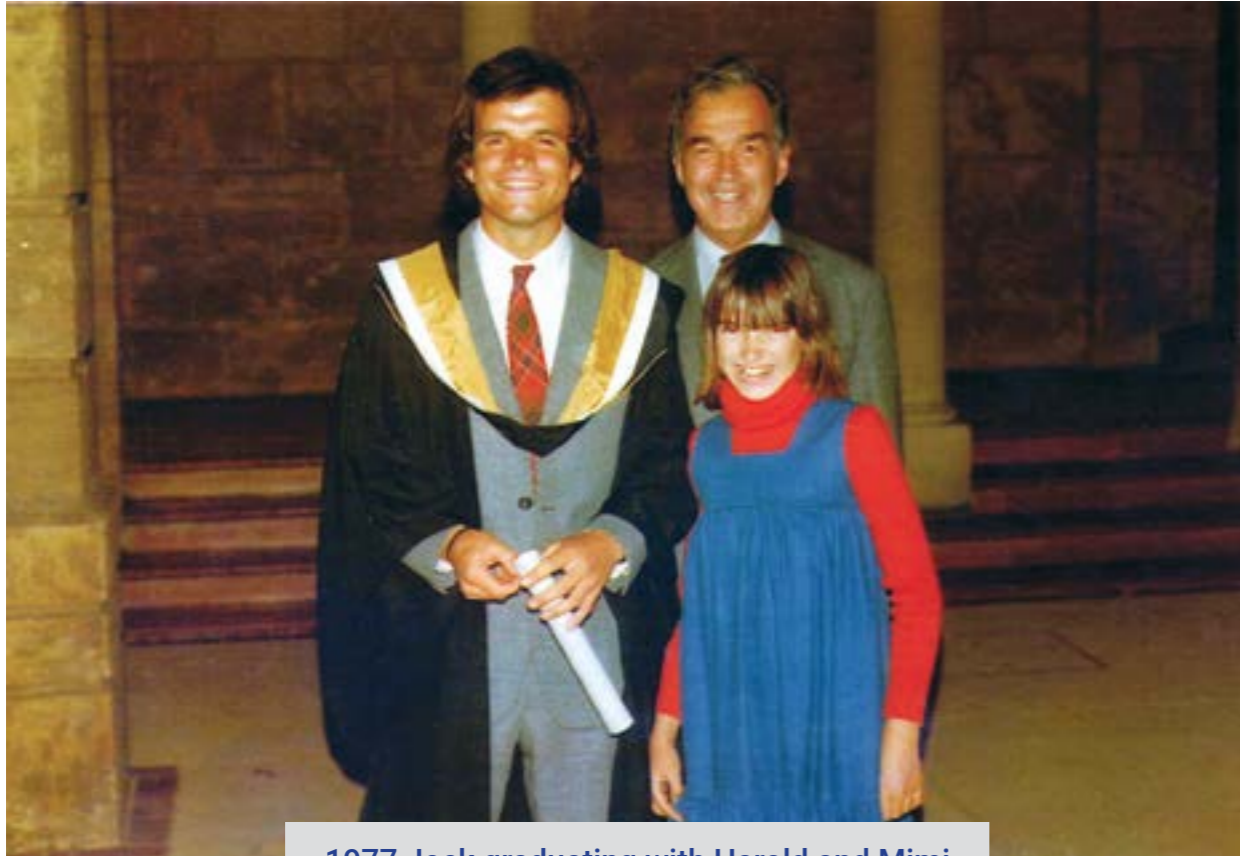
I was on the Senate of UWA for 12 years. I mainly learnt how ineffective and incompetent it is, and it hasn't changed. It's badly designed because the University Act dictates that the Senate is to be represented by specialists from all the different representative groups. But most of the groups seek to represent their group and not the university as a whole. It's not like a company board where you do what's best for the company and not what's best for yourself. Alan Robson was the best Vice Chancellor from 2004-2015.

Donation to UWA

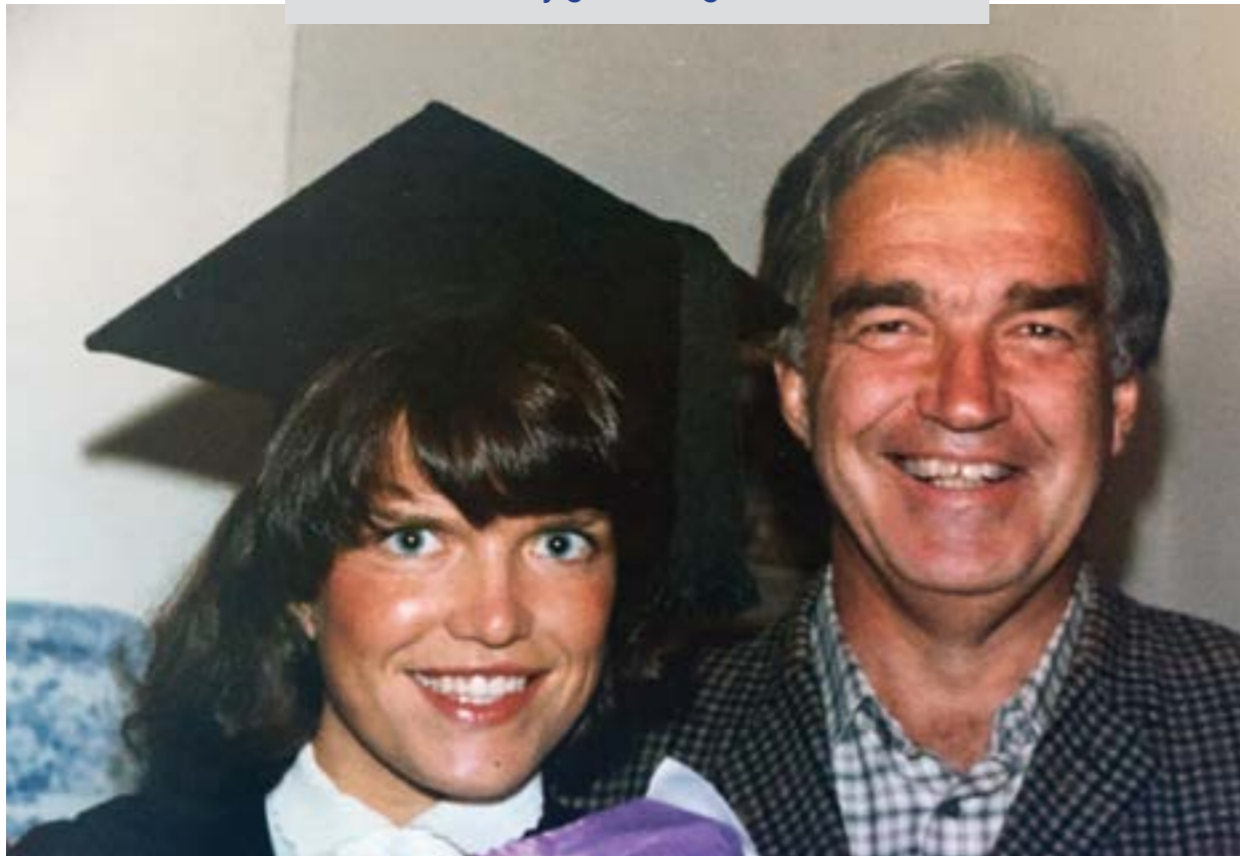
When Alan Robson was Vice Chancellor of UWA, he asked me for a donation and I said how much? He said "\$10 million." "I can't do that. I'll do \$1 million this year and \$1 million next year." Alan responded "Well, we were going to call it the Clough Engineering Building if you gave us anything or not!"

2011 Dr Harold Clough and Vice-Chancellor Professor Alan Robson





1977 Jock graduating with Harold and Mimi



1979 Becky graduating and Harold

Last lecture at University

I used to give a lecture regularly once a semester to the engineering school at the University, and I'd done a lot of work on the 2002 one and thought I'd call it 'How to make a fortune as an engineer'. I was pretty proud of it, because I had a persuasive argument and I told them how to do it. There were probably 60 to 70 students there, and about 20 per cent were women – quite a number, but not a majority. One of them got up at question time and asked me what I thought of women engineers. I responded that not only are they often smarter, but they can use their womanly wiles to get away with things that men never could. I didn't say anything further at that time, but she was absolutely horrified and reported me to the Dean for suggesting they employ their womanly wiles. I was never asked back

again. I got blackballed. If I had any manly wiles, you wouldn't be able to stop me.

Ken Michael

Ken Michael was a brilliant bridge engineer. He did a doctorate in London, then returned to Perth and came to see me about a job. He was a designer and we were contractors, and it's different, so for one reason or another he didn't join us. "I didn't make the grade," he always says.

Ken worked for the Main Roads Department. He became their bridge engineer and, subsequently, the Commissioner of Main Roads WA and Chancellor of the University of Western Australia, and then became the Governor of Western Australia. He was a great Governor, perhaps even better than (Major General) Michael Jeffery.

Mimi, Marg, Libby, Becky, Harold, Bill, Julie and Ken Michael



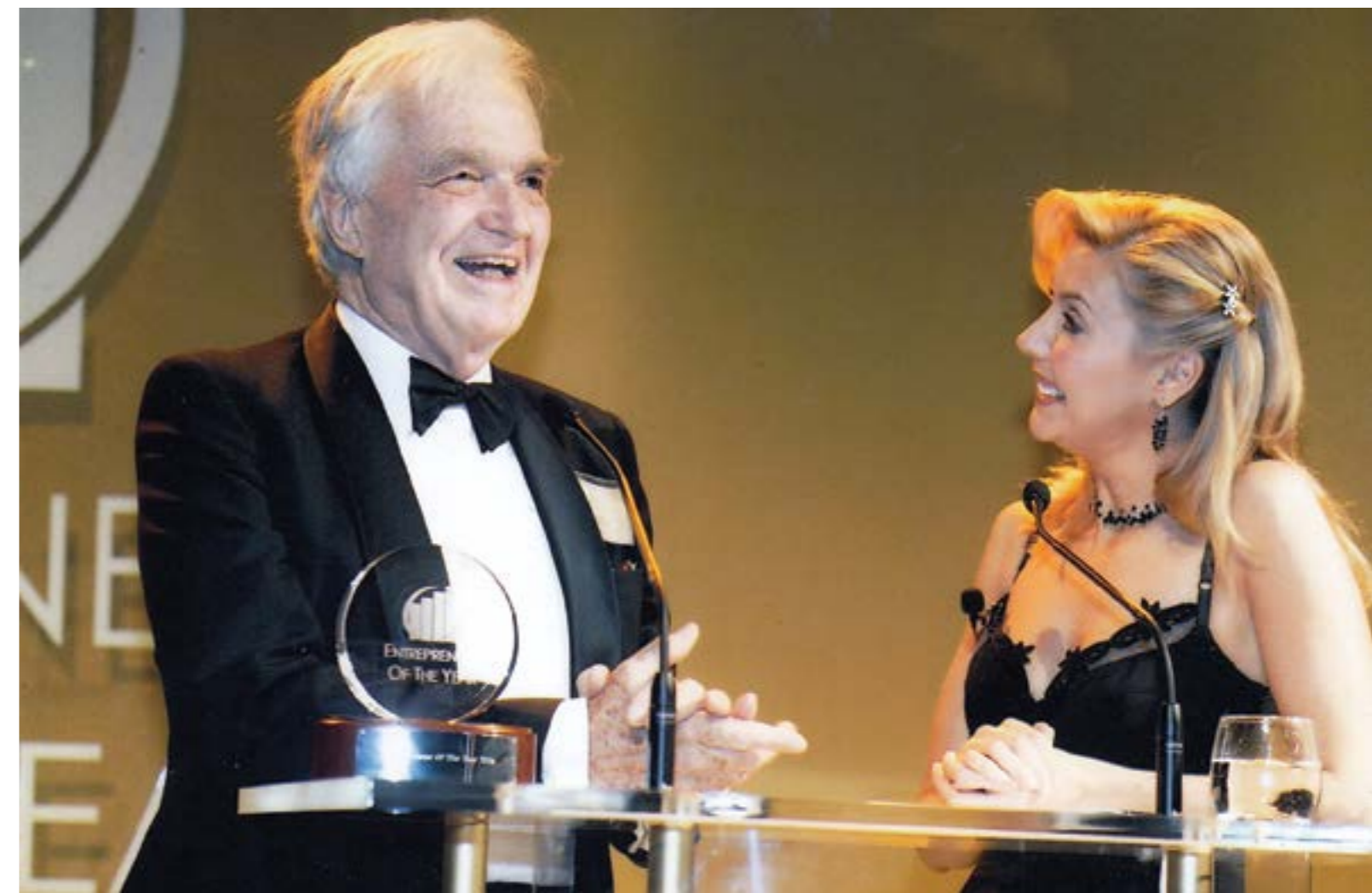
HONOURS



Don Young, Harold and Peter Knight

Sue Murphy quote from UWA Lifetime Achievement Award 2014

"All through Harold's life, starting with the Narrows Bridge and working up to the large oil and gas projects and moving into Indonesia, Harold has always bitten off more than he could chew. He's always taken on bold risks and he's always backed the intelligence of his team and his people almost over common sense. He's given insane amounts of responsibility to very young people and they've all repaid him in spades, because they were so pleased in the trust that he showed in them."



- Queen's Silver Jubilee Medal 1977
- Officer of the Order of the British Empire (OBE) 1979
- WA Citizen of the Year for Industry and Commerce 1983
- Officer of the Order of Australia (OA) 1990
- Honorary Degree, Doctor of Engineering, University of Western Australia, 1990
- Fellow of the Australian Academy of Technological Sciences & Engineering 1992
- James N. Kirby Award, Australasian Regional Board of the Institution of Electrical Engineers 1993
- Peter Nicol Russell Memorial Medal, Institution of Engineers, Australia 1993
- Inaugural Gold Medal for contribution to industry and commerce WA Division, Australian Institute of Company of Directors 1994
- Australian Constructors Association Award for over 50 years contribution to the Australian construction industry 1997
- Named one of Australia's Export Heroes 2000
- Ernst & Young Master Entrepreneur of the Year 2004
- Sir Edward Weary Dunlop Award for improving Australian - Asia relations 2005
- ECM Alumni Lifetime Achievement Award, 2014



1983 Dr Harold Clough AO OBE Citizen of the Year Award for Industry & Commerce, John Christmas OAM, Eugene Le Breton, Henry Kennerson OAM, Barry Sanders OAM, Jon Sanders AO OBE



Harold and Marg with Premier Richard Court



1990 Candice, Bill, Jock, Jane, Marg, Harold, Libby, Willy and Mimi



1990 Marg and Harold Clough AO



1990, on receipt of the Officer of the Order of Australia, Becky, Jock, Marg, Tory Vidler, Harold and Mimi



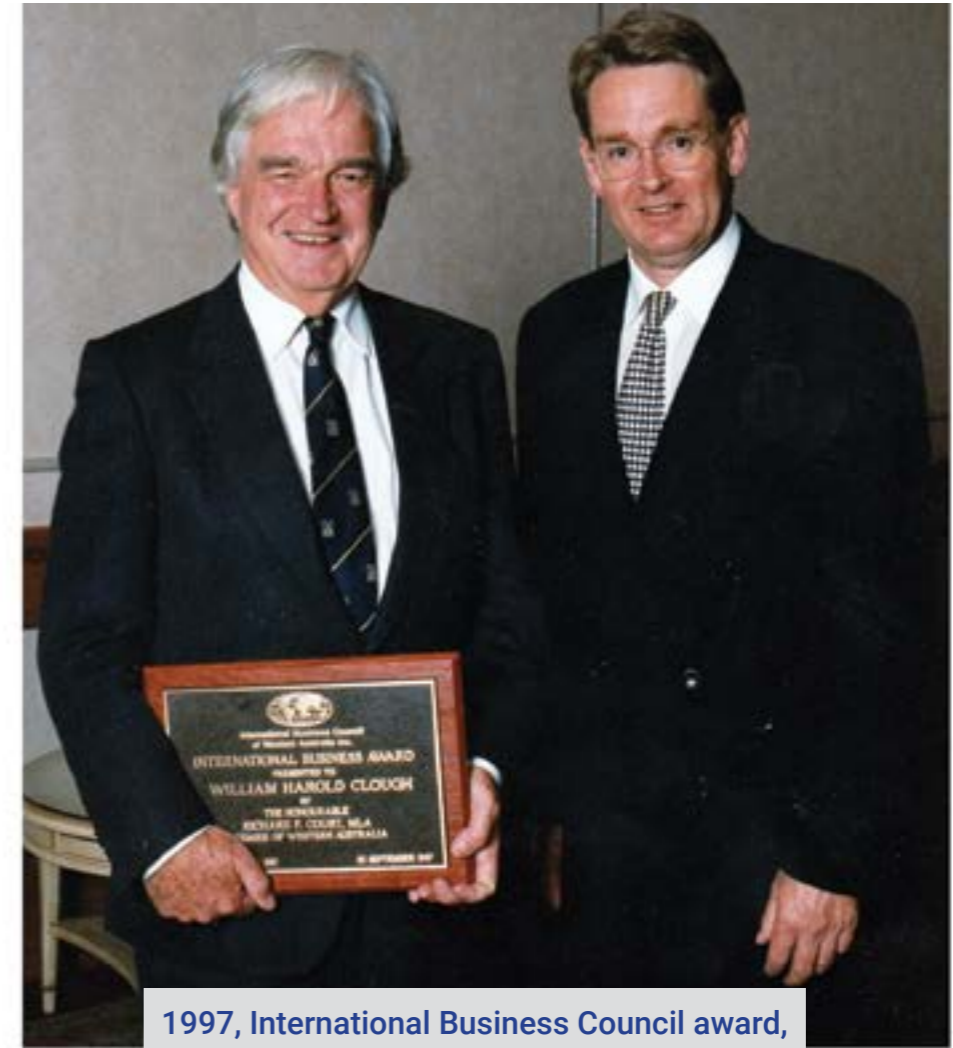
Margaret and Sir Francis Burt, Harold and granddaughter Tory Vidler



1990 Bill, Dr Harold Clough and Jock



1990, Harold and Marg Clough after receipt of Honorary Degree, Doctor of Engineering



1997, International Business Council award, Harold and Premier Richard Court



1993 Australian Export Award, Australian Chamber of Commerce and Industry

VIEWS AND OPINIONS



1998 The Queen's Trust for Young Australians, Grant Awards, Government House; grant awardees with the Governor of WA, Major General Michael Jeffrey and Harold, Chairman



Engineers Australia, Western Australian Honorary Fellows, April 2011 Government House, John Wager, Bruce James, Jim Gill, Peter Knight, Harold Clough, Ken Michel, Albert Tognolini, Ken Kelsall



On industrial relations

Employees and employers have a hell of a lot more in common than they have in conflict. If you can work together to improve the efficiency of the enterprise and it becomes prosperous, you can expect and should get a share of that prosperity.

When the Australian worker is trying, he's the best in the world. I'd pitch our tradesmen against anyone in skill and productivity and anything else, providing they want to try. On the other hand, if he's trying to foul you up, he'll do that more effectively than anyone else in the world. Unfortunately, I think we inherited from our English forebears this sort of class hatred and anything that you can do to foul up the bosses is fair game.

On free markets

2 August 1999 at the Vines Resort:

Free markets

I do not believe in a command economy with large government participation, control and regulation. I believe a free market economy with free enterprise and free trade is a much better and more efficient system. I have worked most of my life as an engineering contractor. Most of our work is won in open tender. It is a ferociously competitive market, but it certainly drives us to be efficient. There have never been any trade barriers in our industry, so we have moved internationally very easily. Whilst I am a great believer in the free market, I spend most of my time trying to find an edge or a corner where I can reduce its discipline. Free and open markets are implacable. They are very tough taskmasters. They are very hard to beat. I sometimes think how soft life would be if only we could have government price

control in the construction industry to ensure we did not make too much profit. Fooling government regulation is easy; fooling a free market is very, very hard.

De-regulation

What we really need is a ministry of deregulation. This should be the most prestigious and important ministry in cabinet, with the task of repealing legislation, making every department justify its existence, challenging every regulation and control. The more we can free up the system the more prosperous we will be. Free trade is the great wealth generator of the world. The more that we can free up the system, the more freely trade will flow, and the more everyone in the community will enjoy the wealth created.

Welfare

There is not a role for the state when people can resolve their own problems their own way. Once people become dependent on the state, the state tends to ossify the process and diminish social responsibility. Governments would like to be like Robin Hood: take from the rich and give to the poor. Unfortunately this does not work very well because there are too few rich and too many poor. So what tends to happen is governments take from the large middle class and give back to the large middle class. The money is not distributed. It is simply recycled.

The government is not an efficient redistributor of wealth. When you consider the compliance cost of collecting taxes and the costs of distributing effectively, you can understand the claim that every dollar the government spends effectively costs the community about three dollars.

On non-government organisations

Some non-government organisations (NGOs) could well pose a threat to the country in the future. NGOs that are controlled by small groups of dedicated believers in a single cause are those of concern. They are usually fanatical in their belief and believe with a religious fervor. For them their belief is a crusade. In the religious fervor for their cause there are elements of self-flagellation. For many fanatics the more pain they cause themselves and others the more they feel washed of their sins. The fact that their actions will cause them and others great pain does not deter them: quite the contrary - that is part of the agenda. They are neither influenced nor interested in facts, logic, common sense or science. They are particularly adept at handling the media. Because their beliefs often predict doom or disaster for the country, if not the end of the world itself, the media loves them. They are responsible to no one. They are careless of the truth. Scientists when debating with them are on a hiding to nothing. A good scientist is never certain of anything. He knows every fact is subject to doubt. Single cause fanatics are absolutely certain of everything.

Because of their high media profile, governments like to appease them. They claim to be the voice of the common people. Actually they are the loud voice of a very small minority. The more governments consult with them, the more they assume a standing and mandate they don't possess. It is a worldwide problem, and some of the international non-government organisations are being given a voice at international forums like the World Trade Organisation and Kyoto

Protocol. They are almost assuming the position of international sovereign states. There is a considerable danger to our country and to the world if small groups of fanatics without any mandate, responsible to no one, whose only skill is media manipulation, can significantly influence policy.

With the Kyoto Protocol they have almost completely taken over the agenda. There is now no fact, logic, common sense or science driving the greenhouse agenda. It is being driven completely by emotion. Their cause is 'man-made carbon dioxide is causing a greenhouse effect that will cause the temperature of the earth to rise, the sea levels will increase and the world will come to an end unless we stop emissions immediately.'

In fact greenhouse effect is an unproven scientific hypothesis. If it is proven to be true it is estimated that over the next 30 years the world temperatures may rise 0.6 per cent centigrade and the sea level may rise 12 centimeters. Neither of these changes is in any way a disaster. The changes will be very slow and there will be as many that are advantageous as there are disadvantageous. Adaptation is a much better option than prohibition. For example, over the next 100 years the effect in Australia would be Hobart would gradually assume Melbourne's weather, Melbourne would assume Sydney's weather, Sydney would assume Gold Coast weather and everyone would be better off. It certainly is not the end of the world.

On climate change

I am Treasurer of the Lavoisier Society and a Director of the Institute of Public Affairs, both of which are leaders of those

sceptical of the science that promotes carbon as a pollutant and the hypothesis that global warming is being caused by human actions.

The introduction of a carbon tax is in my view the most damaging legislation we've had since Federation and, if it proceeds in the way it's planned, will result in billions of dollars being charged to Australian industry and then used to buy carbon credits from overseas companies, mainly in China,

which have said they will never restrict carbon dioxide emissions. This voluntary transfer of wealth must be unprecedented in history and, if it is enacted, surely can't last for long.

Climate change is now a multibillion-dollar industry in Australia, and much more worldwide. Even when the science is exposed as a fraud, it will take decades to wind down. It is undoubtedly the biggest confidence trick of all time.

In a letter to Tony Abbott, leader of the Opposition, dated 16 March 2011,

"The Liberal Party by necessity must be a broad church with many members of different views. On many issues this must be accommodated but everything should be looked at from the basic framework of the Liberal philosophy. This for me is the difference between free enterprise and all the freedoms associated with this, like free markets, free trade and personal freedom, generally with minimal government control, as opposed to the Labor Party belief in governmental bureaucratic control on all aspects of our lives.

Neither you nor anyone in the Liberal Party ever expresses a liberal philosophy. It is an outstanding story. It just needs a leader to clearly espouse it and the great majority will follow.

There are issues where the leader must be accommodating. You won the leadership of the Coalition from Malcolm Turnbull by one vote. When you had a vote with the same group on the same issue immediately after your election you had an overwhelming majority. That is leadership. Most people are fence sitters. Given leadership, most will follow.

You won leadership on a climate change issue. Climate change, or rather anthropogenic global warming with carbon dioxide considered a pollutant, is still a central political issue. For some it is a religion and no logical argument will affect their belief. It is also a multi billion dollar industry with hundreds of thousands of reputations at stake.

The science is fatally flawed, the measurement subject to fraud and it is a confidence trick similar to the year 2000 computer scam, but a thousand times greater. You once described it as crap and you were right. The public may not understand the science, but as they see their annual power bills continue to double they are beginning to

understand the cost. They are also beginning to understand whether the science is right or wrong, whether the doomsday predictions are right or wrong, what they are paying for today is not going to make the slightest difference to the outcome. Whatever the outcome, getting nothing for their money is not acceptable.

As a leader you should confidently say you believe the science is crap. The party policy which you support should recognise that there are different views, and promote more study of the science. Not accept that 'science is given' and study the effect on that basis, but study and debate the science itself.

You have a unique opportunity to be a great prime minister, but without clearly enunciated policies that everyone understands you will never get enduring support. Making policy on the basis of the last opinion poll is fatal. The country is crying out for leadership. You can afford to be wrong half the time and still get full support if you lead and listen."

In 1990

I consider myself an environmentalist, but I also advocate sustainable development. Engineers like to build things. Environmentalists too often give the impression of being against building anything. Our problem, I think, is that we've got a lot of fanatics. One of the things that really gets up my nose is how they make everything a crisis. I don't think there's any doubt that they're winning the debate. Industry and the public are losing because they are not answering their arguments. We have to be more involved. We all like the environment. It's a bit like motherhood, everyone believes in it, but we can't afford to be blinkered about it.

The biggest threat to our environment is poverty. To protect the environment it is vital we have a strong economy. Without a strong economy, the environment suffers. A review of the state of the ecology in poor countries of Eastern Europe and the Soviet Union confirms this.

On lawyers

I have always liked the definition of an engineer as someone who can build for one dollar what an ordinary person can build for two and which would cost 10 or 20 dollars if a lawyer or accountant were involved. I think I'd revolutionise the legal system if I had my way.

I once suggested to Chris Zelestas, a leading lawyer in the community, that they were 'the sand in the free flowing gears of business.' Generally I look upon engineers as being the productive members of society and lawyers as being the counter productive members of society. I think I'd revolutionise the legal system if I had my way.

From speech of 22 October 1996, titled, Lawyers and Engineers – Differing Perspectives, given to the Institution of Engineers Australia

"Engineers look upon lawyers as sand in the well-oiled, smooth-running gears of commerce. We consider engineers as the productive sector of society and lawyers as the counterproductive sector. Perhaps it comes from university days when lawyers would chant "Even engineers, are oft reduced to tears, begging us to save them, from a just 10 years."

I recall a Chief Justice of the High Court of Australia, Sir Gerard Brennan, stating "The system of administering justice is in crisis." It is said that for the system of justice to be done, it must be seen to be done. Currently justice is seen not to be done. Bond Corporation stole a billion dollars from the shareholders of Bell Resources. The case took decades to resolve, but Alan Bond went to jail for stealing a painting. About the same time it is alleged that Rothwells stole more than half a billion dollars from its depositors. Charities, widows and orphans all lost money they had deposited in trust at his merchant bank. Laurie Connell went to jail for getting a jockey to jump off a horse, but the court case against Rothwells went on for years.

As engineering contractors, we avoid lawyers like the plague. Our policy is never litigate. Always find another way. My old mate Lang Hancock always used to say "If you have a good case, never litigate. If you have a lousy case, go for it." In litigation he believed you always had a 50/50 chance. You won or you lost. When I say we never litigate that does not mean we never get into disputes with our clients and consultants. Our current contractual system was designed by lawyers to create confrontation, so disputes are almost inevitable. How do we handle them?

Firstly, we keep negotiating and compromising until we can go no further. At this time we have usually defined our differences. Someone usually starts suggesting arbitration and litigation and we all shudder and crawl back into our holes to calculate how many millions that will cost. We recently had a contract where our claim was \$34 million and the client had offered \$28 million. We were a long way apart and at a stalemate. I suggested we toss for it: quick, simple, definite, very economical and probably as fair as a \$5 or \$10 million court case. My client said, "Harold, I'd love to. But what would I say to my partners if we lost?" When my client decided that he could not toss a coin to decide the final settlement, I managed to convince him that we should go for cheap, quick justice rather than long-winded expensive justice. I am completely convinced that cheap quick justice is every bit as fair and just as long-winded expensive justice. It is probably fairer and more just.

The case was a technical one, so we suggested a lawyer as the arbitrator and an engineer as an adviser. The special twist was that we engaged the arbitrator on a fixed lump sum of \$100,000. We then did not have to worry about setting timelines. The arbitrator quickly realised that it was very much in his interest to be expeditious. He also realised that he had to get to the heart of the problem, so he became very impatient with submissions providing great volumes of information on matters that were peripheral and tended to confuse rather than clarify the key issues.

It is very difficult to condense complex and confusing differences into concise and simple issues. Like an engineer designing a structure or machine, it is

easy to design something that is complex and complicated. It takes a lot more time and skill to design something simple and functional, like the speaker who apologised for the length of his speech because he had not been able to spend the time and effort necessary to write a shorter one.

This in my mind is where law has gone off the rails. Lawyers refuse to condense cases to the simple core issues. Cases go on for weeks and months and years while the lawyers argue over trivia.

In the early 1990s, I was taken to court by a neighbour when I built across his right of way. What a dreadful experience it was — not only were the legal fees outrageous, but my lawyers wanted expert opinions and valuations from nearly every consultant in the city, expert opinions by the dozen, each one costing at least a few thousand dollars and most many times that. Most applied to trivia. In the end we settled and none of them were used.

A classic example was when our QC asked the cost of restoring the right of way to its original condition. This was works and costs with which I was very familiar. I took out an envelope and jotted down half a dozen items: bulldoze the boatshed, bulldoze the wall, fill in the cutting, etc. I put down my estimate and gave him a cost: a million dollars. "Oh no, no, no. That would never do. We must have a proper estimate." Fortunately I had the resources, so I got one of our young estimators to take out quantities, apply unit rates and come out with a proper estimate. "It must be impressive," I said, "lots of numbers, lots of paper." The next day I had 20 pages of computer printout: very impressive, quantities, rates and lots of numbers and a price of \$1,000,000. "It's the same

number," said the QC. "Of course," I said, "I told him the price I wanted."

"Oh no, no, no. This will never do. We must have the right price. You have a conflict of interest. We must get a proper price from an independent expert." So I rang a mate who was in the demolition business and is currently an expert in the field, and told him what I wanted. A week later I had a quotation from an independent expert for \$1,000,000.

"It's the same figure again," said the QC. "Of course," I said, "I told him what it should be."

"Oh no, no, no. This will never do. We must have the correct cost. I must be certain our figure is right." I pointed out the only things we can be certain about are death and taxes. He was not amused. I had lost all credibility. I had mocked the system. But this is part of the problem. Nothing is certain. Nobody knew or will ever know what the correct cost of restoring the right of way should be. Even if we did the work and kept accurate costs, who is to say that the work was done efficiently or inefficiently. In any case it did not matter. The cost was somewhere between \$500,000 and \$2,000,000 and that was probably close enough.

What can we do? I suggest the legal profession look hard at cheap quick justice. Why don't we privatise the judiciary? Form a company, hire a 'bewiggery' of judges and offer cheap justice. Minimum fee \$100 for a one-hour case. Twenty minutes for the plaintiff to present their case, 20 minutes for the defense to respond, five minutes for the plaintiff to reply, five minutes for the defense to sum up and 10 minutes for the judge to write and deliver his judgment.

Maximum fee \$4,000 for a five-day case. No case allowed to go on for more than a week. Make lawyers concentrate on the key issues. Remove most of the play-acting and pantomime. For the barristers it always seems like a competitive game that they can play at their client's expense.

Of course it could never happen. Half the lawyers in town would go out of business. Perhaps we could make them engineers and productive members of society.

On genetically modified foods

The opposition to GM foods is a similar abuse of science and scientific principles, but insignificant when compared to the cost of the belief that carbon dioxide is a dangerous pollutant, when in fact it is just as important as oxygen for our survival and its production should be promoted and encouraged rather than taxed.

I asked the butcher if he had any inorganic meat because I don't like eating poo-fed food. If food is not fertilized with inorganic fertilisers it has to be fertilised with animal excrement and I'd rather have clean inorganic chemicals than dubious animal excrement. I think that's the right word. It's better than 'shit.'

The constant complaints about how we're being poisoned by chemicals is difficult to reconcile with the fact that the more that we're exposed to chemicals the longer our life expectancy becomes.

On work

In 1966

Business is not a matter of life and death, and need not be tackled with grim joylessness. It is more serious than a

game, to be sure. But if squeezing an extra 10 per cent out of a deal means robbing the job of all pleasure, it isn't worth it.

I think luck plays a bigger part than most of us like to admit. Of course you can make your own luck, and offsetting the good things are those that go wrong through no fault of your own. A big factor is the time and place, and opportunities are great in Western Australia at this time for my kind of business.

In 1990

You always want to be successful. You don't want to go broke – and Clough could have gone broke a dozen times, and a couple of times it probably should have. You're not really conscious of the growth on a day-to-day basis. You spend more time seeming to go from crisis to crisis. You're never looking at that carrot of big profits out ahead of you it's the needle of bankruptcy at your rear end that keeps you running.

In 1990, Occasional Address at the Graduation Ceremony at UWA

Be enterprising, work hard, take a risk. The disappointments and disasters are shattering, but the successes and highs are great. We need the lows to appreciate the highs.

In 2010

I guess I've had a fortunate life and been extremely lucky. I've also learnt the secret that the harder you work the luckier you get. So I think the two things are associated.

In 2012

I've never made money for money's sake. I just like playing the game. The money's how you keep the score. It's good to have a winning score.



On the press

I despair about the press. The biggest failure of my career was the eight years I spent as a Director of the West Australian Newspaper Ltd. It is the only public company board that I have sat on where I disagreed strongly with nearly all my fellow directors at every meeting. I wanted to improve the quality of reporting and suggested we double the salary of reporters ("Oh, we want that") and halve the number ("Oh, we don't want that"). Trevor Eastwood, the Chairman, had a policy that the Board should not be involved in editorial policy, and the editor should have a completely free hand. I disagreed with that. I thought editorial policy was fundamentally a board responsibility. It was terrible. He asked me to resign, so I wrote a letter of resignation and said I would have it published in the Sunday Times. He then persuaded me to stay.

What I learnt was, journalists do not write to inform the public, they write to impress each other. They are nearly all imbued with a herd mentality. When one takes a position on an issue they all follow. They excel in sensation and scandal. Most disdain any real research or knowledge of an issue, and most are a closed inward-looking group with zero loyalty to their paper and total loyalty to their groups.

On Sir Charles Court

Did I tell you about the time when I went to see Sir Charles Court and I was late? I had an appointment with him and I arrived two minutes late and he really berated me over it. When he finished I made an excuse and said "I'm sorry, Sir Charles, but I was only two minutes late," and he said, "If you're not 10 minutes early, you're late!"

I remember Sir Charles telling me a story of before he went into politics when he was in the Australian army. He was involved in corralling a whole division of the Japanese army after the surrender on Bougainville in 1945. In those days it was hard to get the message through to the Japanese army that they'd surrendered, and he was sent out as a young officer to pick up several thousand Japanese somewhere or another. It was all a bit of a rabble – and then he blew his whistle and they all stopped and listened, and then he told them what they had to do through his interpreter.

On cars

When I started my car the other day I was thinking how, when you turn the key on, it always starts first time. In the Stanley Street days when it was wet and cold you could never start the car in the mornings.

Marg used to keep her car in the carport and I used to park on the front verge, facing downhill, and there was a reason for that. I used to keep a can of CRC in the car, and if that didn't work then I'd push the car down Stanley Street to kick-start it.

In the late 1950s to save petrol I used to regularly coast down Kings Park Road from the highest point on Mount Street near Kings Park, where there's a memorial to Edith Cowan, the first Australian woman to serve as a Member of Parliament, with a clock on it. I'd turn the key off at the top of Mount Street and coast down until I got nearly to William Street, near where Uncle Bill had his office at 133 St George's Terrace. There were no cars then, so it was easy to get a parking spot. Petrol was rationed and you had coupons. Marg used to work at the Liquid Fuel Board. There was a whole government department set up to ration petrol.

I've never been much of a car person. I remember coming back from overseas and the office had bought me a BMW. They'd bought it because none of them wanted to buy a BMW for themselves if I was still driving a Holden. One of the first times I took it out, I was parking in the Wesfarmers parking area, and backing into a bay I gently ran the tail light into an upstand that you couldn't see in the rear view mirror and broke the glass. I thought that would cost a dollar, and then thought given it was a BMW they'll charge me \$300, but they charged me a fortune, maybe \$3,000, and I objected strenuously. I asked them if that meant I'd have to replace the whole engine if I broke a spark plug. I got rid of the BMW and everyone at the office was out of luck. I thought we were all better off driving Holdens than BMWs.

On another occasion I decided that the differential in my car was making a noise and I was very aware that the cost of fixing the diff was more than the car would be worth, so I decided to buy a new one. The problem was that the diff in the new car made more noise than the diff in my old car, plus the new car was also full of bells and whistles and it used to nag me about things like you haven't done your seatbelt up or you have your handbrake on. They couldn't turn the extras off, because they were part of the system, so I finished up selling the new car.

I remember my 1992 Holden Berlina was stolen on Christmas day 2015. The cops found it abandoned in Chidley Point Reserve just a kilometre away, and they went out of their way to help me, even hotwiring it for me. I wrote a letter of appreciation to the Commissioner of Police, which I thought would give the two policemen a big commendation.

I always liked my 1992 Holden Berlina. I thought it was going to outlive me, but someone drove into me in late 2017 and after the accident it was a write-off. It took the full brunt of it on the passenger door side.

decided that we'd get them fruit, so I had a fellow who delivered fruit every day, and that extended to the other things you needed to make a sandwich.

I've found that no matter what you say to people, they still work over lunch.

You talk about the football and cricket, but also about work, and in a better framework than you do in meetings. You also learn about families and issues and when people need support.

On traveling light

I always travel light: two pairs of underpants and two pairs of socks, one shirt, one pair of trousers and one batik shirt in Indonesia, no pyjamas. One day on, one day off. No second business shirt, I just wear the same shirt three days in a row, but I do wear a singlet. I have three items in my toilet bag that I didn't use on my last trip. I must get rid of them!

On retirement

Retirement is still some way off. I've still got too much to do. As you get older, if you are busy and have a lot to do you don't get time to die. I have too many things to do next month. I'll just have to put it off.

On lunch at the office

For most of my working career, we have had a unique lunch ritual. We didn't provide lunch, we used to provide everything you needed to have lunch. It was something we started in Clough and then did at McRae. The idea was, if you get everybody to eat together at lunchtime you know more about what's happening in the company than from attending lots of meetings. We used to have various charities wanting to give chocolates and lollies and the like. I

2015 Harold's birthday celebration at the office, Jock Clough, Thomas Spencer, Robyn Millett, Suzanne Sweeney, Geoff Goodwin, Alby Atkins, Stephen Quantrill, Matt and Bella Liddelow, Diane Mulligan, Tiahn Jarrett and Gemma Carson
Front: Mimi Packer, Harold, Violet, Bonnie and Jake Liddelow



PROFESSIONAL ASSOCIATIONS



The Australian Institute of Public Policy (AIPP), 1983

When Malcolm Fraser was Prime Minister (1975-1983), John Hyde was leader of the 'dries' in the Liberal Party, a group that advocated economic rectitude and soundness in public finances and rejected short-term populism. John once told me of a meeting at Parliament House in Canberra when all the Liberal Party ministers got together to have their photo taken. There was a photo of the previous leader of the Liberal Party, Billy Sneddon, which was crooked and Fraser was righting it and John Hyde said "It would be easier if you took the knife out of his back." Fraser never forgave him, but it was just so true.

The problem with Fraser was that he was representing the wrong party. He was a Laborite. I can understand why John Hyde was never made a minister. He was too outspoken and considered that many of the coalition's policies were no better than the preceding Whitlam Labor government.

When John Hyde lost his federal seat in 1983, Sue was studying politics under Paddy O'Brien at UWA, and she got together with Bill, John Hyde, Paddy O'Brien, Hal Colebatch and a group of other pro free-enterprise thinkers and they decided to set up the AIPP, the Australian Institute of Public Policy. John believed there was a place in Western Australia for a think-tank along the same lines as the Institute of Public Affairs (IPA), in Melbourne. We funded the set up of the AIPP and John Hyde ran it, and at some stage he got Mike Nahan working there too.

We ran the AIPP for a number of years and put out policy papers. John Hyde and Paddy O'Brien would fight because

Paddy would write papers and John would refuse to publish them. At one time, when they were having a tremendous row, Bill stepped in and arbitrated in a way that really impressed me. This was during the Hawke/Keating years when we were in Opposition. Then the fellow who ran the IPA came to Perth and sought to amalgamate the two groups. It made sense because we had the same philosophy and we were both producing policy papers. In 1991 the AIPP and IPA merged and John Hyde went to Melbourne and ran the IPA. John Roskam took over as the Executive Director of the IPA in 2005 and is brilliant.

In my view, the basic framework of the Liberal philosophy is free enterprise and all the freedoms associated with free markets, free trade and personal freedoms, generally with minimal government control. There should be a safety net of Liberal support for those who are disabled and unable to take care of themselves. This compares to the Labor Party belief in governmental bureaucratic control of all aspects of our lives.

Chamber of Commerce and Industry WA

For a long time the Employers' Federation and the Chamber of Commerce and Industry WA were separate entities, though often providing services for the same clientele. This was a time when the workforce was much more unionised than it is today. In nearly all industries unionism was compulsory, like it still is in the Government. The Employers' Federation participated in negotiating the awards, which were argued in the Arbitration Court, and then advised their members of the condition of the award and represented the employers in the Arbitration Court if they

were in dispute with the union. The system should have worked, except the employers abided by the rules and the Unions ignored them.

Clough Ltd had been a member of the Employers' Federation since about 1954. I remember the Employers' Federation came to our place in Archdeacon Street and said we should join. We only had half a dozen employees then and we paid a fairly modest amount. By the 1960s we'd grown quite a lot, and it was about that time that Lyndon Rowe, the economist at the Employers' Federation, asked me if I would join the committee that ran the Federation as a member, along with a dozen or more others. I agreed, and it was interesting because all the other members of the committee were leaders of Perth business and I got to know them. They were all good contacts and I decided it was worth the time it took.

After about three years, I was elected President of the Employers' Federation in Western Australia, Lyndon Rowe was promoted to Director, and we took on Colin Barnett as our junior economist. I think Lyndon Rowe, Colin Barnett and Mike Nahan had all done economics at Curtin University at the same time. Colin Barnett left the Employers' Federation as economist and got the job as Director of the Chamber of Commerce. We'd always wanted to amalgamate the two because we had common members. The difficulty was that the directors were all prima donnas who wanted to be in control. We believed with Colin Barnett that we'd be able to amalgamate the two entities. It took a few years, but we achieved it and I became President of the merged body, the Chamber of Commerce and Industry WA.

I was then the delegate for the Australian Chamber of Commerce and Industry and went to the meetings with the heads of all the State and Territory Chambers. I quickly became President of that and then, I started to go to all the Chambers of Commerce in Asia and the Pacific, which had 20-30 members and included most countries except China. I recall the Indian delegate saying that Australia wasn't Asian and shouldn't be a member, but I slayed him in an argument, saying whether you like it or not we're in Asia and we're not going to move! We also debated whether America should be a member.

I soon became Vice President of the Asian Pacific Chambers of Commerce. They invited me to be President but the difficulty of that was that you had to pretty much work full-time visiting all these other chambers. It would have been interesting, but it was a period when Clough absorbed all my time and so I declined.

In most countries the Chambers were semi-government departments, usually financed by the governments and largely controlled by them. We bent over backwards to ensure our independence.

I got to meet some great people. I remember Aburizal Bakrie was the President of Kadin, the Indonesian Chamber of Commerce. He wanted me to buy property in Indonesia. In 2009 he was elected Chairman of the Golkar Party, and he's by far the biggest crook in the country, an absolutely dreadful man, completely without morals. I haven't seen him for 20 years, but he was declared the Golkar Party's presidential candidate in 2014 and remained the head of the Party till December 2015.

Australia-Indonesia Institute

The most recent thing I've done was with the Australia-Indonesia Institute, which had about eight or 10 members. I was a member for about 10 years and that's where I met Georgina Carnegie.

We used to meet half a dozen times a year, and once a year we used to go to Jakarta and get squired around by the Australian Ambassador, meet the President and all the dignitaries, and visit a lot of the outlying provinces. We were always met and escorted everywhere by the Ambassador, travelling in his ambassadorial car with flags and motorcycle outriders. The roads would be cleared and we would go through as a convoy. Everyone used to stare to see who it was and we used to wave, particularly in Jakarta. It used to go to my head. The President of the Australia-Indonesia Institute was always a government appointment and nearly always an ex-ambassador or someone of that ilk. I think it was on the last trip that we went up to Aceh in northern Sumatra, and the President got ill just before we went, so I was acting-President. They gave me a shawl that I brought home, and Libby has it on her wall.

There was another fellow in the Institute called Tim Lindsey, who is a Professor of Asian Studies at Melbourne University and completely fluent in Bahasa. Lindsey had written most of the Indonesian law that they had adopted, and most of the senior Indonesian ministers had been his students. At each of our meetings the Department of Foreign Affairs and Trade used to provide an advisor to brief us on the current situation in Indonesia. Tim Lindsey also used to brief us. What was embarrassing was that his briefing was

always 10 times better than DFATs. In fact DFAT used to go to the meetings to listen to what he had to say. He had spent his whole life studying Indonesia and was amazingly well connected.

Often at meetings in Indonesia they didn't have chairs; they'd just sit down and squat and I used to get cramp. I remember discussing the difficulty of going to the toilets because you had to squat and you had nothing to hang on to. I asked Lindsey how he managed and he told me that he'd lived the first ten years of his life in Indonesia. That was where he learnt Bahasa, and he knew how to put his feet together and squat on his heels and so the squat toilets weren't a problem for him.

Western Australia also had an Overseas Trade Group that I chaired.

From about 1968 when we first went to Indonesia, we did quite a lot of work overseas, and by the time I left Clough it was doing more overseas than nationally, so we were regularly export heroes and that sort of thing. What it meant was that I was away a lot because much of the work required travelling. I certainly found it much more enjoyable travelling for business than as a tourist, because you got to meet the locals.

FAMILY MATTERS



The farm at Bullsbrook

One of Uncle Bill's clients was Humphrey Parkes. He had a farm at Merredin, but he and his wife, Esme, decided they wanted to move closer to the city and so they bought the farm at Bullsbrook. They wanted to improve it so they could have more cattle, but they didn't have any money because the farm wasn't earning anything, and they were in a quandary. From memory it was a time when we had three or four kids and Marg and I had talked about buying a place up in the hills where they could go and pick mushrooms and do the things you like to do in the hills. I mentioned to Uncle Bill that we were looking for a place to buy and he told me about Humphrey and the problems he was having, and so I met Humphrey and we agreed to a partnership. We agreed on the value of the farm, and I started lending him money, assuming a percentage interest in the farm on the value of the loan. I'm not even sure if we had anything in writing.

We built a little cottage and used to stay overnight, which was quite an experience. It was a site building we'd had, and we picked it up and put it on the farm. It had no electricity and none of the creature comforts that we had at home.

We would pick mushrooms and get sheep manure for the garden. We used to walk down to the dam, cross over the stile, and Jock used to catch fish. He got trout fingerlings and bred them.

We were at the farm in 1969 and Becky went horse riding with Dale, one of the Parkes' sons. That was a dreadful day. She fell off and hurt her back and Dale came home really concerned. Stanley Parkinson, the doctor who lived next door to us at Stanley

Street, was at the farm with Rebecca and me. Stan told us not to move her and laid her very straight in the car. She stayed in hospital for six and a half months, and was lucky to walk again. I encouraged Becky to learn all the states and capitals of the USA and, after that, great reams of Shakespeare and Longfellow.

The partnership with Humphrey worked well, but then we got to the stage where we had 47.5 per cent and Humphrey still needed money, so we agreed that we'd stop our system so that Humphrey always retained control and thereafter the money would be a loan. Then we sold part of the farm to Midland Brick. We got a good price because they wanted a portion of the farm that had clay on it. We did a swap of land with them where they got some land with clay on it and we got a bigger tranche of land, which we kept and is now Tannamurra, and Humphrey got cash. I'm sure we've been working with Humphrey for over 50 years and we've never had an argument.

Jock elected to take ownership of the new parcel of land in place of owning a part of the family strata title at The Coombe in Mosman Park. He built a magnificent French-country-style farmhouse and garden on *Tannamurra* and he and his family spend a lot of time there, and even developed a marron farm. Jock's daughter Josephine married Ryan Stanstreet in a unique wedding ceremony at the Lookout on Tannamurra in April 2016.

Cliffdale Station and Hell's Gate Roadhouse

Cliffdale Station in Queensland has a history. We had a manager called Alf Taylor at Clough who was working in Sydney and Melbourne and went up to Cairns where there was a contractor he knew. This fellow was in trouble. He wanted to tender on a road on the Gold Coast, but he didn't have the capacity and Alf suggested we work with him. We went along with that, but in the end it was obvious that he had a lot of debt and not much to offer, so we effectively bought him out. We bid on the road on the Gold Coast and built it, but it was a difficult contract and we lost money.

One of this fellow's company assets was a 50 per cent interest in Cliffdale Station, a vast cattle station in the Gulf area of Queensland near the border of the Northern Territory. The total area of the station is 171,000 hectares and it's a long haul, not somewhere you go for a couple of hours. Bill Olive used to work with the company that we took over, and another fellow owned the other half. A mate of Jock's went for a trip around the north of Australia, and I suggested that he stop at Cliffdale to see what it was like. He reported back that Bill Olive was a great guy, but the guy that owned the other half of the station was a no-hoper. We subsequently bought his share, and that caused us a certain amount of grief. When you buy a station there's a lease, but the value is in the cattle and to get the cattle you have to buy the brand. But we didn't know this and so in 1980 we bought the lease, and then we had to go and buy the brand!

We ended up owning a 50 per cent share in Cliffdale Station with Bill Olive. He was married to an Aboriginal girl, Leonie, and

they had a son called Alan. When Bill Clough was 18, he spent six months with Bill and Leonie Olive at Cliffdale and learnt about cattle. He told hair-raising stories of catching rogue bulls. They had to get the bull on the ground, and when they missed and the bull got to his feet they had to get to the nearest tree, and there weren't many trees! Bill loved it and Bill Olive turned out to be great bloke.

It was hard to make money on the station, because we didn't have enough cattle, fences or water, but in all sorts of ways we were able to help Bill. I remember once when we finished up with a dozer in Darwin and it wasn't worth bringing back to Perth, we sent it to Bill and he loved it to build dams and the like with, and kept it running for 15 years.

Bill Olive then said he wanted to apply for some freehold land on the highway to supply fuel, provisions and accommodation to people on their way to the Northern Territory. He wanted to call it Hell's Gate Roadhouse from the name of the small gap in the escarpment, through which the road passes, one kilometre south of the roadhouse. The name of the gap originated in the early days of settlement of the Gulf, when the police contingent would escort settlers and travellers to the 'portals of Hell's Gate'. From that point onwards, they were on their own until they reached the safety of police protection at Katherine, in the Northern Territory.

Bill Olive got permission and Hell's Gate Roadhouse was officially opened in April 1986. As was befitting a location with such a name, the official party consisted of a padre from the United Church, a father from the Catholic Church and a sister from the Dominican Order of Nuns.

Aboriginals used to come to buy liquor at the Roadhouse. We did a roaring trade, and the station and the roadhouse became quite profitable, but then the nearby Aboriginal settlement became a dry area and sales fell by half. At its peak, Hell's Gate Roadhouse featured on the front cover of Time Magazine.

Then Bill's son Alan, who sometimes worked with them, got engaged to a girl who was going to inherit several million dollars and they decided they'd like to buy the station. Jock set a price of \$1.5 million for our share. They were keen to buy it at that price, but after a year or two they split up and Alan didn't want to work there any more. Bill and Leonie bought a station about 300 to 400kms south in the tablelands. It's very much smaller than Cliffdale, but much richer. They thought they would breed cattle on Cliffdale and then fatten them up on their new property before selling them. They plan to retire there. We lent them the money and they bought the place and paid us back, so they own that in their own right.

The lease for Cliffdale Station came up for renewal in 2012/3 and there was an inspection by the Lands Department or whoever controls the stations in Queensland. Bill and Leonie made an application to renew the lease. We had a valuation done by Ray White & Co, the sales agents up there, and they valued it at \$7 million. We both agreed we should sell after the renewal of the lease and it was finally sold in December 2015.

At one time we were going to buy Lawn Hill National Park. It was a beautiful oasis in the outback with emerald waters, spectacular gorges and lush vegetation. Whoever had previously owned it had planted an orchard of mango trees and that sort of appealed to me. Interestingly, the famous 'cattle king' Sebastiao Maia from Brazil took over the lease of the station in 1976.

We got a valuation and a full report and were negotiating to buy it when, in 1984, the government decided to turn it into a National Park and it's now called Boodjamulla National Park.



Hell's Gate Roadhouse sign



Hells Gate



Harold and Marg, Leonie and Bill

Tennis on Saturday afternoons

The Saturday afternoon tennis group started with David Jewkes, who had a tennis court in his front yard when he lived at 19 Airlie Street, Claremont. David had a son Andrew and Sue were at kindy together, and that's where Marg met David's wife June Jewkes in the early 1960s. They became great friends. David rang me and said he was going to start a tennis group on Saturday afternoons and asked whether I'd like to join it. I said yes, I'd like to come along every now and again, but he said no, you have to come every week or not at all. I wasn't sure about that, but I went along.

worked with a company that sold steel (we bought the fender dolphins from him for Shark Bay), Peter Breidahl, an anesthetist, and Phillip Nash, an ENT. When Bill Hayes was in his nineties he had a very bad ear infection and Phil Nash looked after him. When he went away for a couple of weeks, Pieter Packer took his place and Bill thought Pieter was marvelous.

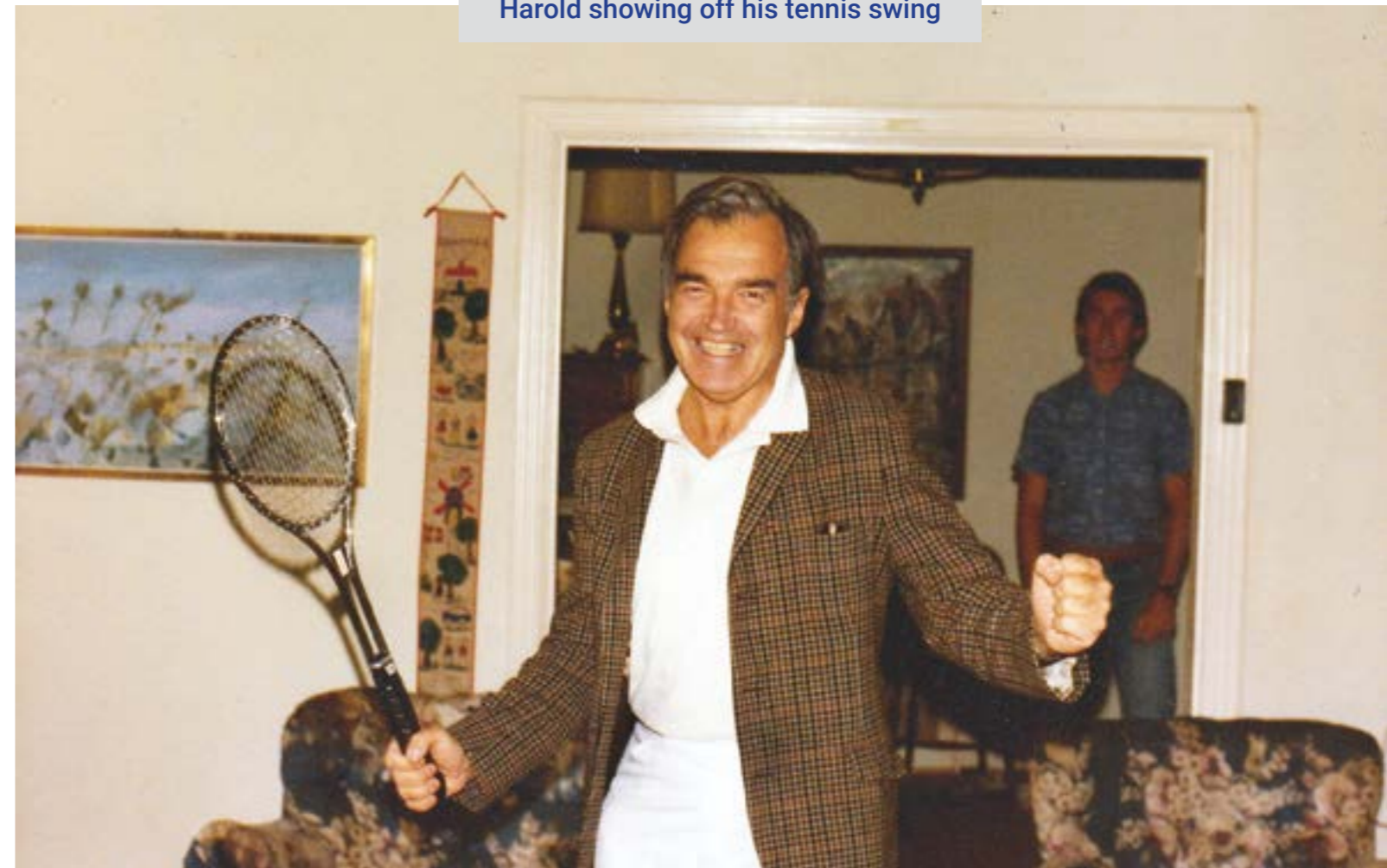
We started playing tennis every Saturday afternoon in the early 1960s. Shortly after June died, in the late '70s, David sold Airlie Street and went to live in Barsden Street, Claremont, which didn't have a tennis court so we played at the College Park Tennis Club on Princess Road for 15-20 years. When we moved to The Coombe in 1997, we played on the tennis court here, but by then the membership had changed quite a lot. There were Jim Quirk, Terry Burke, Lex Cohen, David Atree, Max Schloss, John Kollosh and Jeff Hall.

There was David Jewkes, who was a chemist and had a shop in Newspaper Arcade, which was a very popular arcade and all the journalists used to go to him, Terry Burke, a doctor, Lloyd Benjamin, who



2004, back row, Essie, Marg, Harold, Wil, Libby, and Leonie Olive, front row, Jock, Annabella and Bill Olive

Harold showing off his tennis swing





**Back row: Jim Quirk, Terry Burke, Max Sloss, Peter Firkins, Alex Cohen
Front row: Geoff Kennedy, David Jewkes, Harold Clough, George Seddon**



**2012 the Penguins on the court at The Coombe,
86 year old Harold in the beige jacket**

While we were still at College Park, I also started to play with Lang Hancock on Sundays, and that's where I met Jeff Hall. At first we played at John Craig's place in Dalkeith, and then Rose built his mansion in Mosman Park and he had a tennis court there that about eight of us used to play on. Lang always wore distinctive long white pants when he played tennis, whereas everyone else wore shorts.

Overseas holidays

In 1968 the Cold War was so tense that everyone believed Europe could be destroyed by nuclear bombs at any time, so I decided to take the family to have a look at it before it got blown up.

Marg didn't like to fly. She was scared of flying. It was much less pleasant in those days because the propeller planes, DC3s, flew at low altitude as they weren't powerful

enough to fly high, and consequently it was always much rougher. Jet planes made all the difference in the world, because they got up above the weather and flew 10 times as far. Airfares before the 1960s were prohibitively expensive, so people travelled by train or by sea. It was only the rich who travelled by air.

Instead of flying, Marg decided to go by ship and I arranged to meet the family on arrival at Southampton in England. They caught the Angelino Lauro to Durban and then to Southampton, where I met them and we drove to Gerrards Cross, Buckinghamshire, and had Christmas there with Vassy, Marg's sister (Dorothy Fever née McRae), and Roy and their three kids, Susan, Sally and Paul. A few days later we flew to Munich, hired a car and drove down through Switzerland and into Austria. We finished up in Innsbruck, where



1969 Harold meeting the family at Durban, South Africa, Jock, Mimi, Bill, Becky, Libby and Marg



1972 Before boarding a flight at Perth airport, back row, Harold and Jock, middle row, Libby, Sue, Marg and Mrs Johnson, front row, Bill and Mimi with her basket holding her twin dolls



1970, Igls, Austria, Libby, Marg and Mimi, Harold, Becky, Sue, Bill and Jock

we asked where the best skiing was and were directed to the Tyrolean village of Igls, which was close by and was the location of the 1964 and 1976 Winter Olympics.

We found an Australian instructor and learnt to ski. Marg started to learn, but on the first day Sue twisted her knee and ended up in a cast, and Mimi ran away from the kindy where they all spoke German, so Marg decided fairly early on that skiing wasn't for her. Sue sat at the Sporthotel and ate apple strudel, drank hot chocolate and fattened up. All the boys would come by to sign her plaster. Marg would go to Innsbruck to shop and buy dirndls and Tyrolean linen.

We would also go ice-skating in Igls. Almost every town in Austria had an outdoors rink. I lived up to my reputation of old wooden legs, but the kids learnt to ice skate.

After a week or two skiing, we drove on through Europe. Eventually we returned the car in Munich and flew home from there. We usually hired a car in a central location and drove from there and then returned it.

We used to go overseas every second year, and traditionally we always went to Igls, but one year we decided to go to Zermatt. It was our first day on the slopes, and so I asked an instructor his advice. I explained that it was our first day and we were just beginners, and enquired where the most appropriate beginners' slope was. We followed his advice and got up near the top. The piste was covered with skiers and we were just starting down when it started to snow quite heavily. Almost immediately the slope that had been covered with skiers was empty, because the skiers zoomed off and no one was starting down the



Jock



Sue



Harold and Mimi



Harold

slopes. It was a complete whiteout. You couldn't see six inches in front of you. We didn't know where the piste was, and we didn't know where we could get out of the snow. At that stage Mimi fell over and said "I can't go any further." Jock and Bill took off straight away and disappeared into the mist. I'm not sure where the others were, but they were all better skiers. I think it's the only time I hit Mimi. I said "Get up and get skiing!"

Anyway, we finally made it to the bottom. I was gathering up the stragglers, and there was a walk of about 100 metres or so from the bottom of the slope to the restaurant. I was sort of pushing myself along, head bowed, when a ski plough came along and buried me in snow.

Becky was at the restaurant when we finally got there, and she had frostbite. We were quite worried about her for a while,

but she thawed out. You can see how you can get into real trouble in the snow if you don't know what you're doing, which is why I'm so glad that my kids can all ski, and ski quite well. I think Becky represented WA in the skiing one year.

It's the same with other sports and games. If you learn tennis when you're young, you can always go to a tennis party if you're invited. If someone asks you skiing, you can go.

We went overseas six times in 13 years. I would meet different companies during these trips. Even back then we were doing a lot of work with foreign companies, initially joint ventures in Australia and subsequently working with them overseas.

Family holidays:

- **1969/70** Angelino Lauro - Durban - London (NYE) - Munich - Igls (Sporthotel) - Zurich - Perth; San Francisco - Cliffs Bechtel - Scott Wesslingh
- **1972/73** Windsor Castle - South Africa - Igls (Sporthotel); Scotland - Munich - Czechoslovakia - Rome (depart Marg and Sue) - London - Perth
- **1974/75** Eurobags; Perth - Rome - Milano - Venice - Enzo Grassi - Igls (Gruberhof) - Paris - London - Perth
- **1977/8** Sue & Brett Townsend's wedding - London - Munich - Zermatt - Igls (Astoria Hotel) - Munich - Toronto - San Francisco - San Diego - San Francisco - Honolulu - Perth
- **1979/80** Sally Feaver's wedding - London - Wales - Brussels - Hague - Berlin - Poland - Igls (Astoria Hotel) - Monaco - Zurich - London
- **1982** London - Vassy - Bill, Mimi, Marg toothache - Brussels - Paris (A J Scott) - Igls - Perth.

One trip that stands out is our holiday with Meredith in 1977/8. After a lot of difficulty we got visas for East Germany, Czechoslovakia and Poland, so we went across West Germany to Berlin and then through Checkpoint Charlie from West to East Berlin, and from East Berlin we drove to the Czech border.

At that time I was working in the Middle East. We had an office in Saudi Arabia, but I travelled through lots of Middle East countries and had about 12-15 different currencies. When we got to Poland I had to declare all my cash and convert it into the Polish zloty on the basis that I had to have the same amount of money when I left. The East Europeans all wanted foreign currency to send to their relations living elsewhere. We stopped at the border and

the guards insisted we take everything out of the car and open our bags. They had cops with sub-machine guns and all the local people were petrified, whereas my four girls looked on these young cops as a challenge and started flirting with them. The poor cops were trying to be tough. It was an unusual experience for them. I think it took about two minutes for their hormones to take over - better to flirt than to menace.

I remember we had a campervan, which was a great big unwieldy thing. We were going down a narrow street in Czechoslovakia and I swiped a car. Merry said "Keep going; no one saw us." The next day I was in a meeting with Royal Dutch Harbourworks when I had a visit from the police. They tried to arrest me, and fined

me for damaging a car and not reporting it. I think I would have been arrested if not for my colleague at Harbourworks vouching for me.

When we got into Poland, there was a long line of people outside a shop. The kids all lined up too, and when they got to the front of the queue, they got one orange each, which we all found very sad. And when I say got, you had to buy it and it was expensive.

The difference between Poland and Austria was so apparent: the houses were run down and grey in Poland, and so were the people. Happy Austrians versus solemn Poles and East Germans. It was sad, but in many ways it was an interesting education.



1975 Mimi, Bill, Marg and Harold



1978 Salzburg, Bill, Mimi, Marg, Harold, Becky and Libby



In front of the VW kombi van, Marg, Bill, Harold, Becky, Libby and Mimi



1977 Zermatt, Becky, Harold, Libby, Bill, Marg, Mimi and Jock



Harold and Marg



Mimi, Harold, Marg and Bill, Zermatt



Bill, Mimi and Harold, Zermatt

The Coombe

In 1959, when we were just finishing the Narrows Bridge and your mother had four children under the age of five, I suggested that in her spare time she look in the paper to see if she could find some land that had enough space for a tennis court.

Your mother was reading the newspaper, as she does very assiduously, and brought to my attention three lines in the section 'Property for Sale'. They said something like 'Mosman Park riverfront land for sale. Contact Miss Smith.' So your mother and I went to see Miss Smith, whose family had purchased a large parcel of land from the Princep family who were the original owners when Charles Princep was Under-Secretary for Mines.

Miss Smith was living where her nephew Michael George lives now at 3 The Chine. Marg and I had a look at the land on the Mosman Park riverfront, which was for sale for £6,000. I was managing JO Clough & Son at that time and our income was very volatile. I was drawing a salary of £1,000 a year, or £20 a week, so £6,000 was six years' salary and I really wondered if and how I'd ever pay it back. But Miss Smith agreed to take a £1,000 deposit and £1,000 per year for five years.

The only access was the bitumen drive to Miss Smith's house, which was about 40 metres above river level. The current access to The Coombe finished at our boundary with a two-metre high cliff face.

Geoff Summerhayes, the architect, had had a previous option to buy the land and done some drawings, but had no idea how to handle the steepness of the site and given up. I viewed the steepness as an

engineering challenge. Also, by then Marg was expecting another baby and we were running out of room in Stanley Street, so I decided that we were better off building from scratch on a new site rather than adding onto a house, which was usually expensive but didn't add much to its value.

I applied to the Mosman Park Council to build a house on the current site of 21 The Coombe, but at that stage there was no access at all. The Coombe ran all the way to the river as it does today, but it stopped less than halfway up the road that forms our part of The Coombe, where there was a cliff about 2-3 metres in height. Mick Michaels' house at 9 The Coombe didn't exist, and Bob Peters' site at 11 The Coombe had been leveled by someone, but there was a 2-3 metre high cliff on the west side.

I was working out how to access the block and applied to the Council, who imposed a height limitation of just eight feet and 60 feet back from the waterfront. I argued that this was a 'building prohibition'. You could build a dog kennel or a birdcage, but not much else as the minimum height from floor to a ceiling was eight feet. At that time there was no ability to strata title the property and we had to subdivide and incorporate a road 60 feet wide, and once you did that there was no room for anything. I argued with the Council for a couple of years, and got the Minister to bring the matter up in Parliament, but the Council was difficult in the extreme. It wanted to resume all the riverfront land, but not to pay for it.

After a couple of years two things happened: I decided to extend 93 Stanley Street by putting three rooms above the garage and rooms out the back, and I also

got so busy I wasn't able to keep fighting the Council, and so nothing happened for quite a long time.

About 1980, Miss Smith agreed to sell us the block 'below the hump' where Rebecca built for \$20,000. We had got to know Tess Smith quite well, because Marg's parents, Norm and Vie rented her house when she went off on a world trip. At the same time we got the right to buy the balance of her property if she ever sold it, which has been hard to implement.

Tess Smith was a spinster and had inherited the property from her father, who had already sold several lots. The first lot she sold was the piece we bought. We had an agreement that, if she sold any more, then we would have first option to buy it. Harold Camm was the original owner of Gubgub's place at 5 Owston Street. He did a deal with Miss Smith to buy the house where Richard Camm now lives at 1 Saunders Street and the block next door. He sold the block next door to the chap that ran Chamberlain Tractors, which was the biggest manufacturer in Perth at that time. I think Gubgub must have bought from Chamberlain. Then Harold Camm had a son Dick, as distinct from Richard, and Dick married Gubgub's daughter.

Designing access was difficult, but every time I had a couple of engineers out of work I sent them to the property, to what they called 'snake gully', and they would survey and design a road system. For a long while I had the idea that we'd access the site via The Coombe, and wind our way in and drive up to Owston Street. So we designed it on that basis, but then it occurred to me that it wasn't a good idea. As long as we had access, the property could be better used. All the time we were arguing with the

Council as to how it could be developed and then, in the late 1980s, they changed the Strata Title Act to effectively allow horizontal strata, and that meant instead of having to subdivide with a 60-foot road (18 metres) through the centre, we could just have a five-metre-wide driveway.

In the late 1980s, Rebecca decided that she'd like to build a house at what is now 17 The Coombe, and I encouraged her on the basis that all she had to do was get the Council's permission. We finally got development permission, and the biggest argument was how much land we had to relinquish in order to get permission to develop. The Council usually requires 10 per cent of a subdivision for public open space. I suggested they take it at the Owston Street end; they wanted river frontage, and in the end it was agreed that we would have the land up to the cliff face that extended along most of the river foreshore except where the boatshed now stands, which was a gully that you could clamber up. Where the cliff face wasn't defined became a major issue until I took the Chairman of the WA Planning Commission at the time, McKenzie, a nice old bloke, to The Coombe and we walked over it. It was a matter of when a slope becomes a cliff, and I defined it as when you can walk up it with your hands in your pockets. He didn't get very far!

Before we could start building Rebecca's house, we had to build the front wall, which essentially followed the cliff top except over the cave, where I had doubts as to whether the overhanging rock would be strong enough, and we kept back several metres.

When the wall was complete we had it surveyed, and in places it went beyond

the line that had been approximately drawn on the plan. It protruded in front of the planned line in some places, but fell short of it in others. However the Planning Commission's ideas were so entrenched that they condemned it and said we had to pull it down. They also said they would require us to build steps up to the ledge above the cave so that people could use it as a lookout. Fortunately the Minister in charge was Peter Dowding, and he came down and looked at the wall and agreed with me. I am forever grateful.

I then wanted to put in a boatshed, and once again the Planning Commission was completely opposed to a boatshed facing the river. Boatsheds facing the river were prohibited. You could build them in Kalgoorlie, but you couldn't build them where you could use them. There was a dreadful woman whose name I forget, who had a photo in every Post newspaper for a year standing in front of the boatshed saying it would prevent people walking along the river, but finally the boatshed was allowed and that was incorporated into the plan.

Once the wall on top of the cliff was approved, we were able to start work on Rebecca's house at 17 The Coombe. There was a long debate about what materials the house should be built out of: brick and tile, or I suggested that it should be built out of the natural limestone. After much discussion we built the basement wall out of the natural limestone, and that got universal approval so the whole house was built that way.

It quickly became apparent it was to be a rural Tuscan-type house, and so we used imported French tiles and got some assistance from the architect who had

the agency to import them. He gave me a lot of valuable tips as to how to make the house more rustic, including placing a brick course in the stonework at first floor level, and the house certainly had a look of Tuscany. Rebecca wanted a turret and so we built a turret in the corner and cantilevered it out from the walls. We wanted to put a witch's hat on top of it to keep the rain from coming down the circular stairs, but Michael and Helen George complained that they could see it and so the Council wouldn't allow us to do it and we put a flagpole there instead.

Everyone complained when we were developing at The Coombe.

While building Rebecca's house we got the idea of building carports in the cliff behind it, and dug them out of the limestone rock. Subsequently we found that the rainwater came through the limestone above, and so we had to line the inside of the carports with corrugated iron to keep them dry. One thing we learnt doing this is that you can never have too much parking.

Rebecca and Ken moved into 17 The Coombe in 1989. The house was unfinished. There were no wall railings or house balustrades, but it had wonderful unrestricted views! They had to move because they had sold their house in Swanbourne. Tory, Lucie and Indianna were about six, four and two years old, and I recall that Indianna wore a leg-rope for weeks.

About three years after Rebecca moved in, Mimi decided to build adjacent to the entrance gate, at 21 The Coombe. I strongly recommended that she build on three levels like Rebecca, and for which the levels had been designed, but she wanted



1988 Harold at The Coombe



1989 concave ceiling of the boatshed

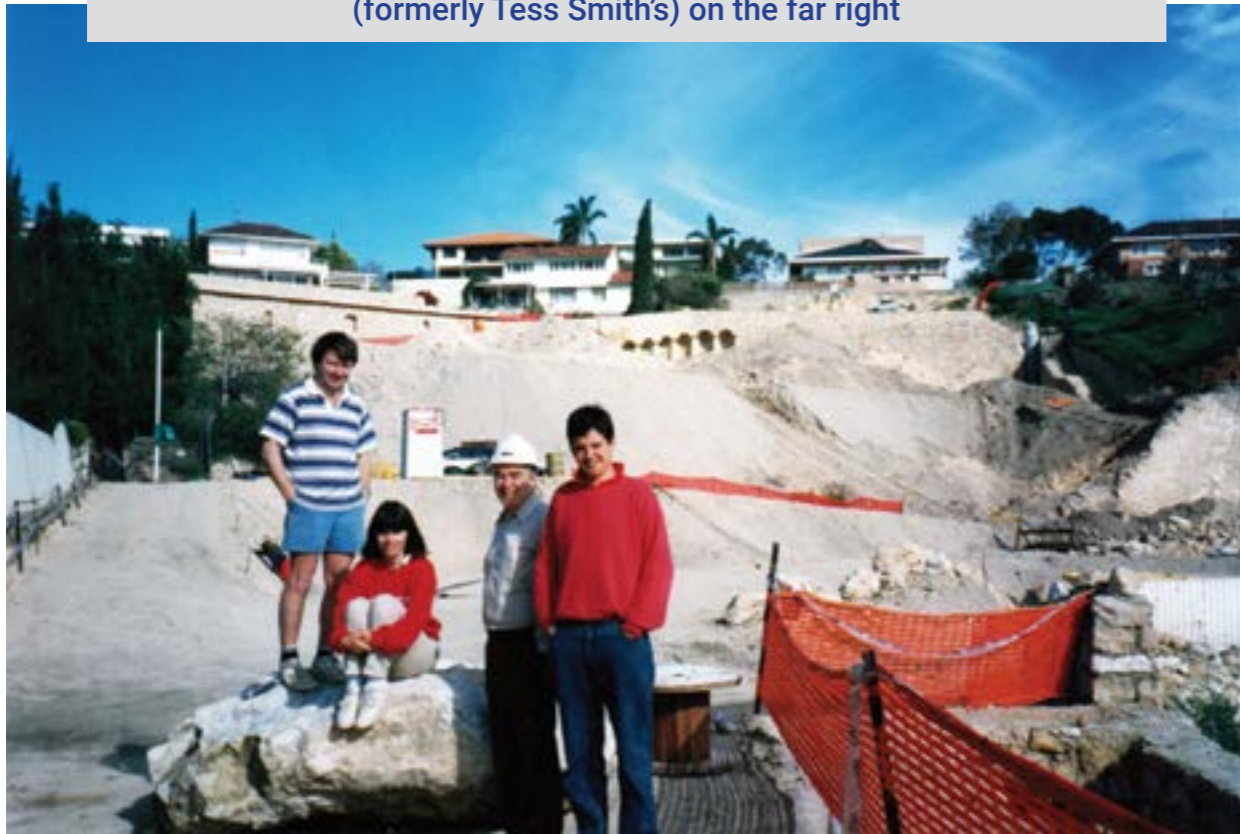


1989 newly completed river wall and boatshed entrance



Construction of the winding stairway that leads to the boatshed from Mimi's basement

1989 Bill, Becky, Harold and Willy Packer on the current site of Mimi's house looking up the valley with Richard Camm's house just northwest of the arches, Gubgubs house on the right, and Michael George's house (formerly Tess Smith's) on the far right



Construction of Mimi's house with the apartments on the right hand side





1994 Mimi's house at 21 The Coombe, nearly completed

a two-level house. The established level of the driveway to Rebecca's and the levels at the front of her block made the entry to any car park at road level excessively steep, and for some time I could see no solution. Fortunately Mimi's father-in-law, Pieter Packer, suggested we lower the roadway. I had mistakenly assumed that the public road level was established and unalterable, and that I wouldn't be able to change that. Pieter's suggestion made everything Mimi wanted possible.

When I looked at it more closely, another problem was the need to lower the sewer main, which runs down the boundary between our lot and the public roadway, and Mimi's lot and Bob Peters' boundary at 11 The Coombe. We suggested to Peters that by lowering the road we could make the entrance into their carport nearly level instead of steeply down, but they did not want any changes and so they've kept

their steep driveway. Being able to lower the public road, and therefore the internal driveway that came off it, meant that access to Mimi's carport and other parking was much better. Pieter's suggestion had all sorts of benefits.

One thing we wanted to achieve with Mimi's house was direct access to the boatshed, and I mistakenly assumed we could simply dig this through the limestone and get down to boatshed basement level. When we came to do it, the material was not rock but loose soil, and consequently the hole started to get far too big. So to get down to the boatshed floor level, which was just above high-tide level, we sank two two-metre-diameter cylindrical pipes and built circular stairways into them, so you can go partly down one and then the remainder down the other. After we had positioned the vertical pipe adjacent to the back wall of the boatshed, Elmo Spadanuda

excavated the material there. I recall being in the boatshed when he broke through the pipe and accessed the boatshed. The noise caused great consternation until he poked his head through the opening!

Mimi has two accesses to the river: one from near the pool down some steps, and the other from the library basement where you go down vertically.

Because everybody liked the natural stone in Rebecca's house, Mimi decided to use the same natural limestone, and Elmo Spadanuda and Bob Bacevic between them built all the stone walls, a magnificent contribution. They were probably working at The Coombe for a decade.

I recall someone asking for my CV and wanting two referees so I suggested the Governor General and Elmo Spadanuda. They said, we know the Governor General, you can't do better than that, but who's Elmo Spadanuda? And I said he's one of the smartest people I know. "Who is he?" they persisted, and I told him he was a builder's labourer.

As we finished Mimi's house in mid-1994, we commenced building a house for Elizabeth at 3C Owston Street, and designed a roadway from the Owston Street entrance down the steep hillside to finish up at the level of the tennis court. We extended Elizabeth's front garden to the edge of Rebecca's driveway, but about 12 metres higher. We then decided that we'd like to excavate the cliff adjacent to the driveway opposite Mimi's to provide more parking, which left us with a three-metre-thick section of limestone between the ceiling of the garages and the roadway from Owston Street. It became obvious that all that soil also had to be supported,

and so I went to the council and asked them whether that area could be used for storage or something. They responded that I could use it for anything I liked, because it wouldn't impinge on the neighbours; I could have an apartment there if I wanted to! I immediately told them that was a brilliant idea and submitted a plan showing two apartments. Marg and I moved into one of the two apartments at 25 The Coombe in 1998.

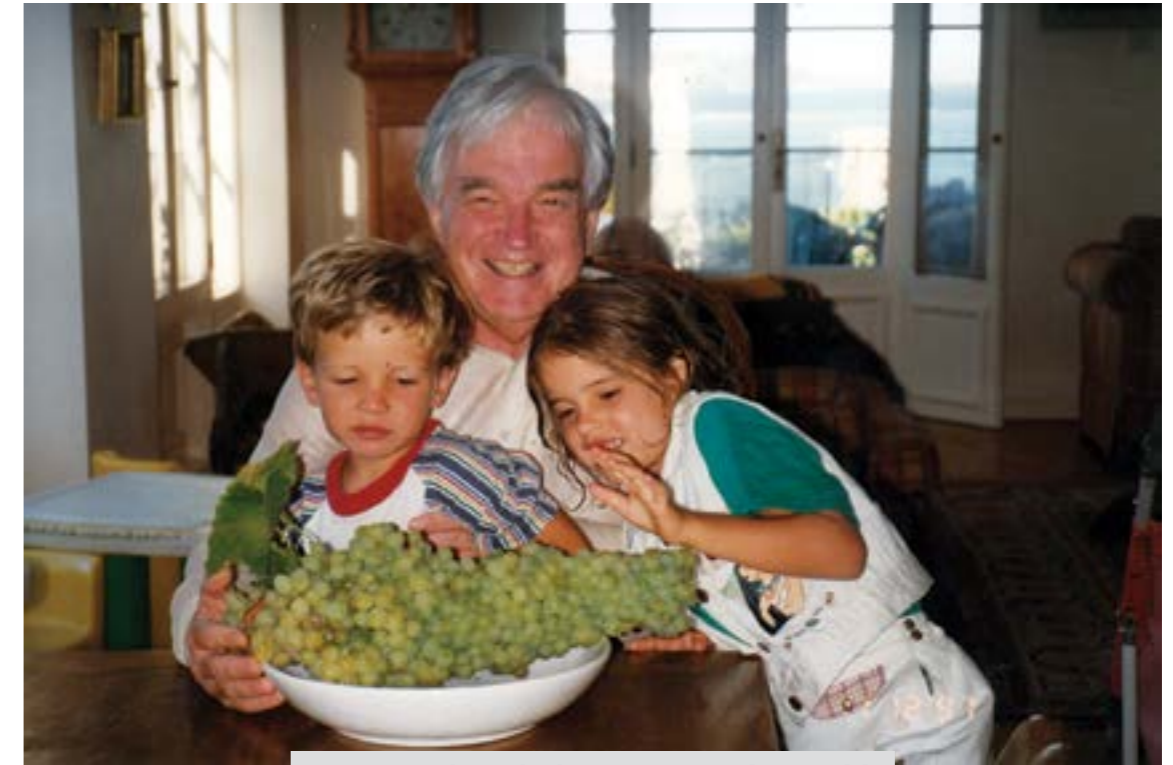
At the same time, we built steps from Rebecca's driveway level up to the tennis court level with arches overlooking the river, which have become a distinct feature of the façade, and we have six double car parks on the driveway from The Coombe that can park 12 cars or boats and trailers.

I once calculated that the property at The Coombe has increased in value by 19 per cent each year since 1960, when we bought it. Not many investments do that. On the foreshore not far from the "dip your nose in" rock and the cave, there is an access now sealed off, which leads down to an extensive water level cavern that extends far under the site. The water in the cavern is fresh in winter, and before we bought the site Miss Smith had an electric pump fitted that pumped water into a tank that still exists on the side of her house. Unfortunately, in summer the water turns salty so the pump and pipeline were abandoned.

We should drill the site down to below water level to determine how extensive and how thick the underground cavern is, so we can work out how to fix it and not face the prospect of large section of the site collapsing. It is apparent that building on a site of weak limestone is challenging.



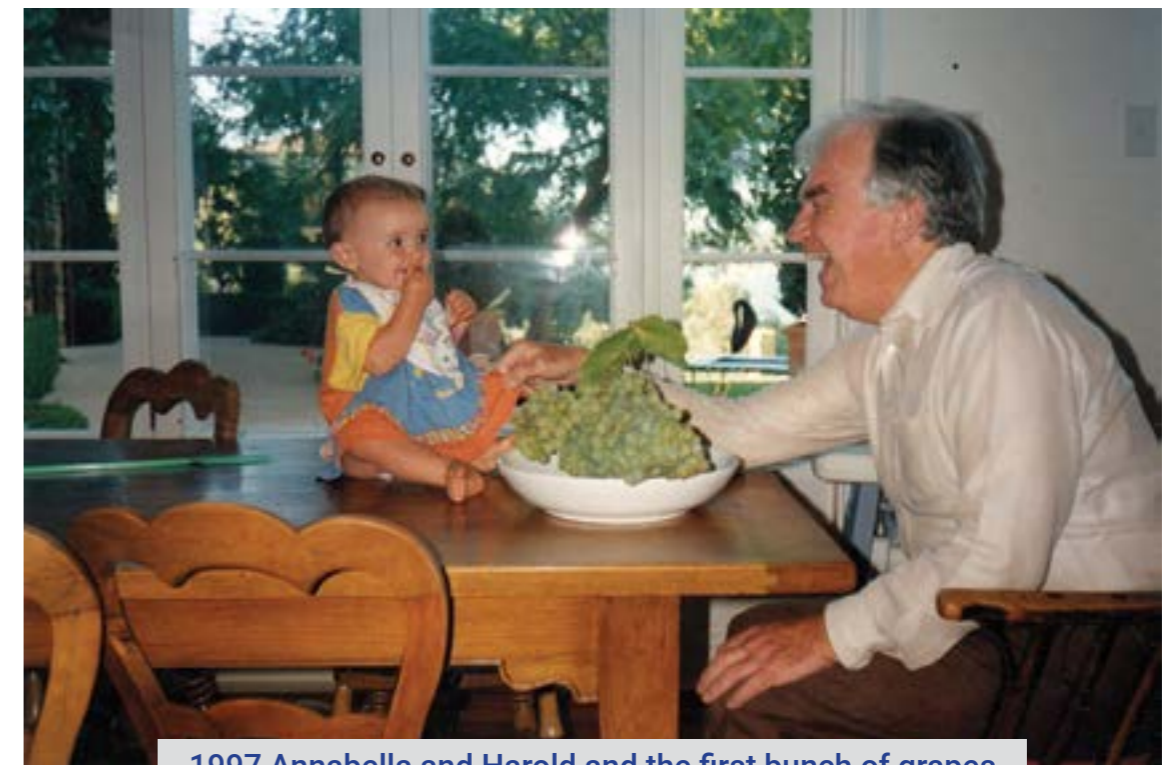
Harold with Elmo Spadanuda and Bob Bacevic, stonemasons extraordinaire



1997 Jock and Clementine with Harold



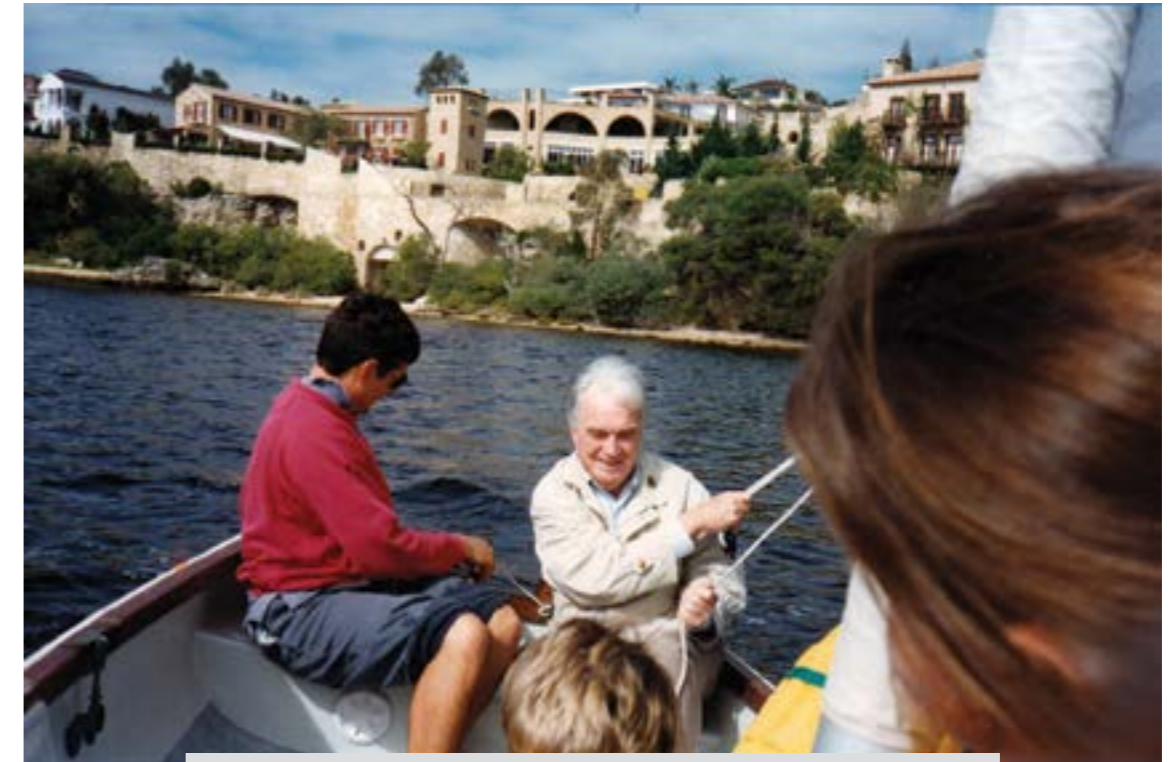
1997 Marg and Harold on their apartment balcony, about to cut off one of the first bunches of grapes. Harold planted grapevines all over the limestone walls as well as citrus and other fruit trees in the orchard adjacent to the tennis court



1997 Annabella and Harold and the first bunch of grapes



The Coombe panorama



1996 Willy and Harold sailing in front of The Coombe

Henry Prinsep was a draftsman and, being well educated, knew the Greek alphabet. After excavating two wells on his property, he carved 'THE CHINE' into the limestone over the first well and some Greek letters into the stone over the second well. The inscription is a phonetic rendition of 'Dip your nose in', which is a mark of Prinsep's humour. The development was the site of two picturesque valleys, The Chine and The Coombe, which were private holiday destinations in the late 1800s.

'The Chine', whose name means deep ravine, was the northern valley. In the 1800s, the site was owned by Henry Charles Prinsep, a draftsman for the Lands and Surveys Office and later Chief Protector of Native Affairs. Prinsep built a cottage and jetty on the property for family holidays and cut a cave into the cliff for use as a storeroom.

The southern valley was known as 'The Coombe', meaning a short valley or deep hollow.



1994 The Coombe from the sky

General Family Photos



1983 Christmas Day, Marg and Harold



1983 Christmas Day at 93 Stanley Street, Tory, Harold and Bonnie



May 1987, wedding of Mimi to Willy Packer with Pieter and Glen Packer and Harold and Marg



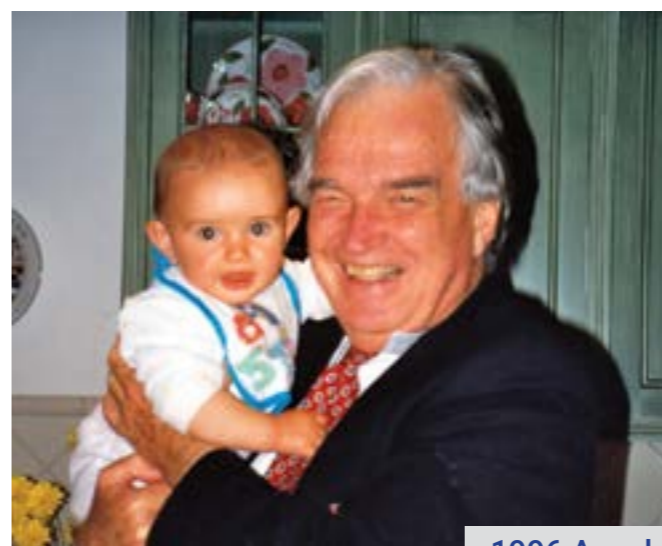
8 May 1987, Harold, ready to retire, and Marg, just warming up



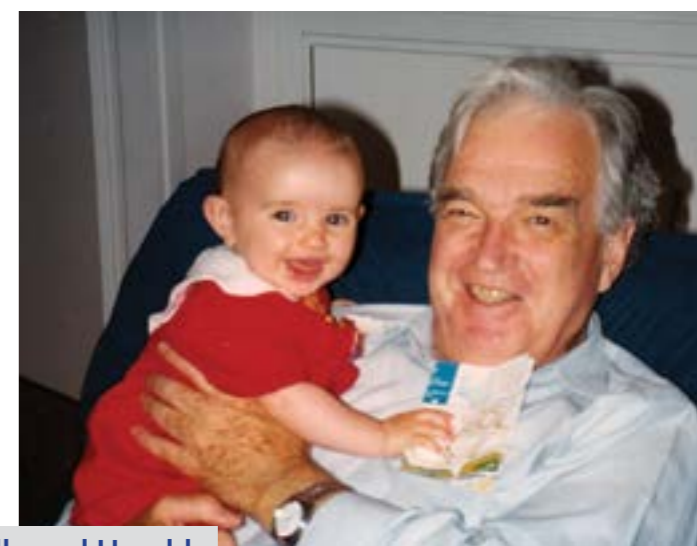
1988 Christmas Day at 93 Stanley Street, Willy and Mimi, Harold and Marg, Tory, Bonnie, Sue and Tedwinklepop, Brett, Becky and Lucie



1989 Harold with Indianna



1996 Annabella and Harold



1996 Christmas, Mimi, Sue, Libby, Harold, Marg, Jock and Bill in front and little Jock on left



1997, Libby, Wil, Essie and Harold



Harold and Bill



1997, Jock and Harold on the dodgem cars at the Royal Show



1996 Lucca, Italy, Harold and Marg



Libby, Harold, Sue, Bill and Stephen Quantrill, Executive Chairman of McRae Investments



Christmas 1998 Mimi, Marg, Becky, Libby, Harold, Sue, Jock and Bill in front



1999, Marg's birthday celebration at the Vidler's house with 15 of their 16 grandchildren (Teddy Townsend is missing), Indianna, Lucie, Bonnie, Harold, Jamie, Marg, Clementine, Tory, Essie, Annabella, Hugo, Wil, Macgregor, Josie, Jock, Callum and Lockie



Christmas 2000, back row: Becky, Libby, Jane, Wil, Josie, Indianna, Ken, Teddy, Sue, Harold, Marg, Bonnie, Tory and Jock; front row: Macgregor, Lucie, Hugo, Jock, Essie, Lockie, Clementine, Annabella, Bill, Callum, Mimi and Jamie



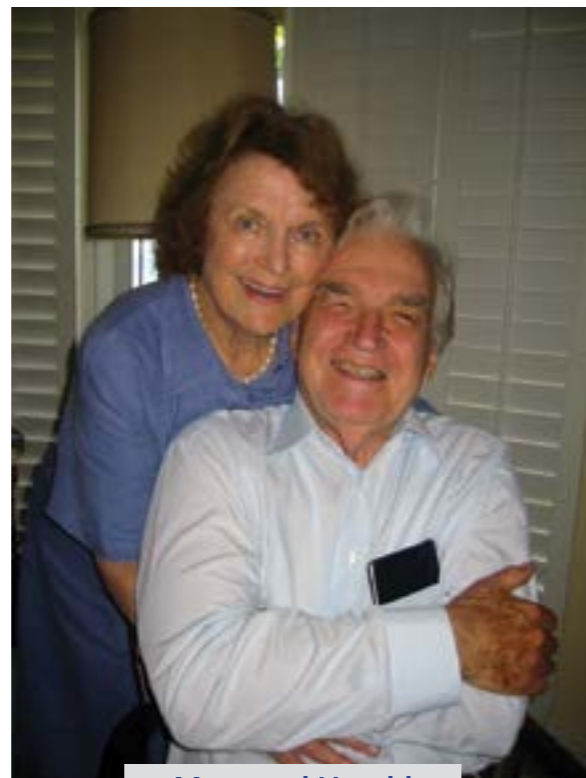
Christmas 2000 Harold and Marg



Christmas 2002, Harold and Willy



Christmas 2003, Teddy and baby Bella, Marg and Harold, Sue, Bonnie and Matt



Marg and Harold



The arrival of Billy's Bouncer from Uncle Bill aka Father Christmas – yes, all his nieces and nephews Christmases had come at once...Jock, Hugo, Ken, Callum, Jock, Mac, Bill, Annabella, Lockie, Clementine, Jamie, Essie and Lucie



Billy's Bouncer in action



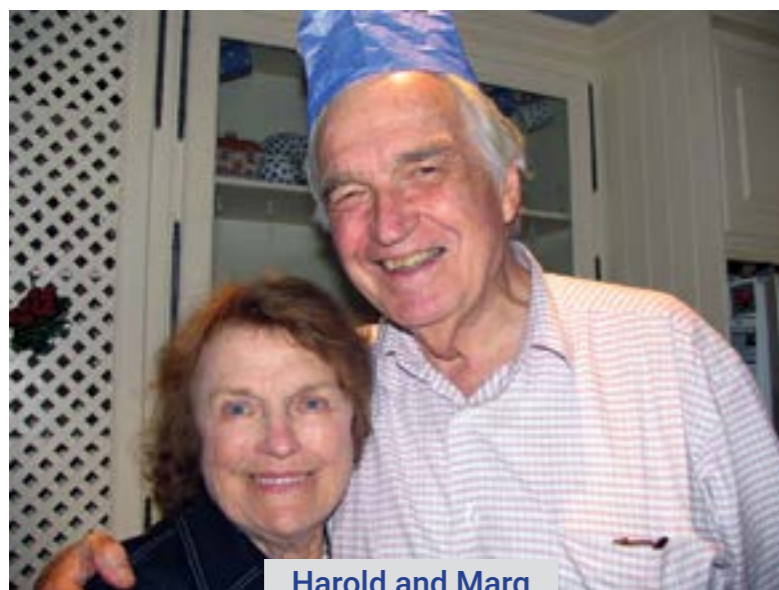
Christmas 2004, Libby, Becky, Bill, Mimi, Sue, Jock, Marg and Harold



Harold and Marg



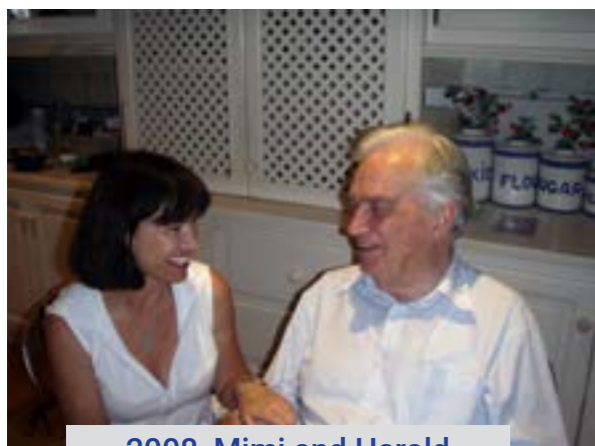
Harold and Marg



Harold and Marg



2009, Harold and Josie at her Moulin Rouge themed 21st



2008, Mimi and Harold



2017, Willy, Barney and Harold facing each other off



Harold, Bill and Marg and their Saturday ritual lunch of well-done rack of lamb with potatoes and tomato and onion pie



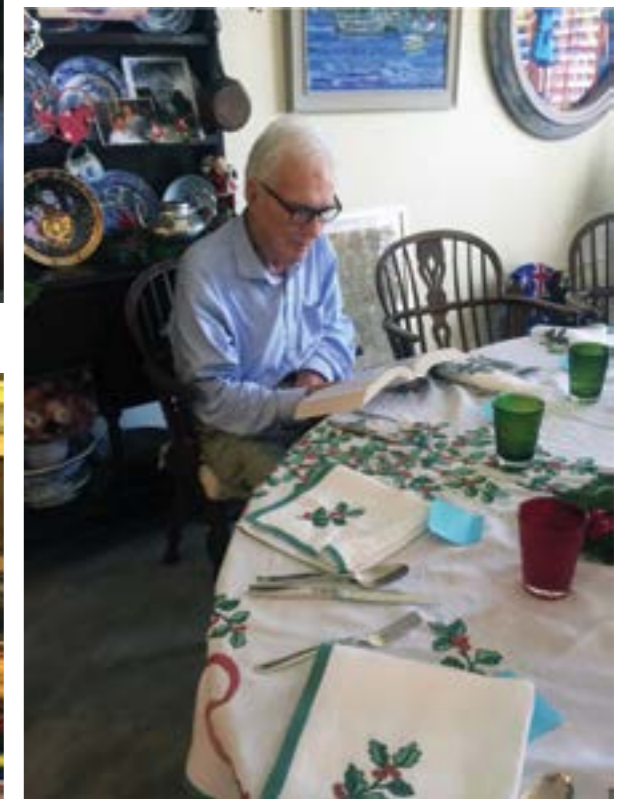
Mothers Day 13 May 2018



2017 Christmas Day, Baby Benji, Teddy, James, Sue, Matt, Violet, Jake and Bella; Front row: Bonnie, Harold and Marg



2017, Marg, Bill aka Father Christmas and Harold



Marnie Duff - Harold and Marg's personal trainer for 15 years





Harold, Bill and Marg and their Saturday ritual lunch of well-done rack of lamb with potatoes and tomato and onion pie

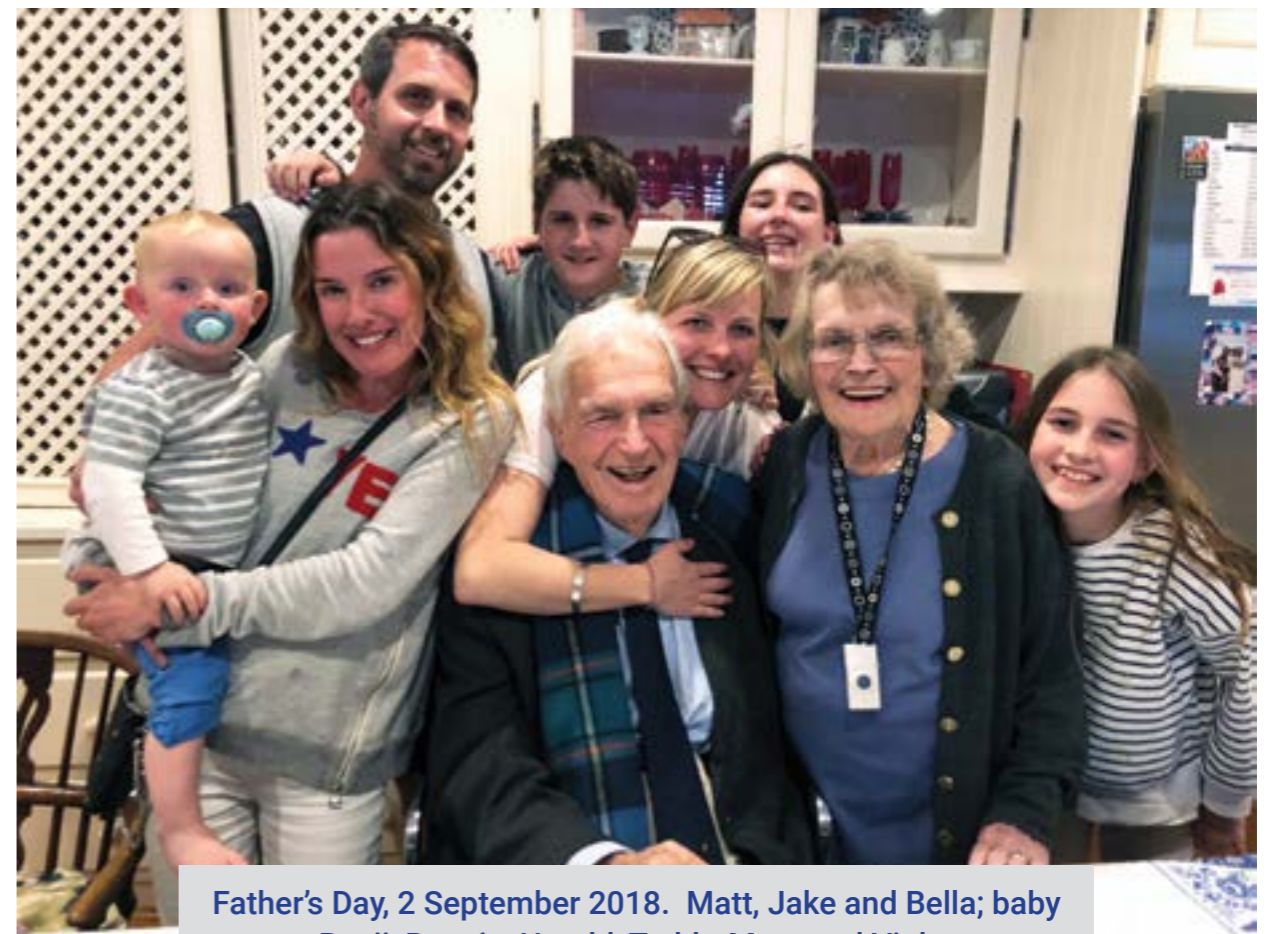


May 2018 Andrew "Twiggy" Forrest, Harold and Nicola Forrest

Twiggy spoke at the Australia-Israel Chamber of Commerce's Dr Harold Clough annual event and said, "We are here because of the indomitable spirit of Harold Clough. I'm honoured to be here tonight. Harold is a legend of this state; he's a legend this country, of this region. Its no surprise that some of the boldest ideas I think have come out of this state; we're isolated, we're tenacious, and we share broadly Harold's indomitable spirit."



2018 Mimi, Willy and Harold at Packer & Co's AGM; Harold was an inaugural Director of Packer & Co when it launched in 1993 and consistently asked the hairiest questions at the AGMs



Father's Day, 2 September 2018. Matt, Jake and Bella; baby Benji, Bonnie, Harold, Teddy, Marg and Violet

Board memberships

- Chairman, Clough Engineering
- Director, Bunnings Ltd
- Director, IBM Australia Ltd
- Director, West Australian Newspapers Limited
- Chairman, Advanced NanoTechnology 2000-2007
- Director, Homestake Gold of Australia Limited
- Director, Perthwaste
- Principal, Indo Pacific Group
- Non executive Chairman, NeuroScientific Biopharmaceuticals
- Chairman Emeritus, McRae Investments Ltd

Board membership - other

- Australia Indonesia Institute
- The Asia Society
- Asialink Council
- Austral Asia Centre
- Australian Malaysia Cultural Foundation Inc
- President and Life Member Chamber of Commerce and Industry of WA
- International Skills and Training Institute in Health
- IPA
- Order of Australia Association
- Patron, Korea Chamber of Commerce, WA
- Vice President, Victor Chang Foundation
- Chairman of Western Australian Trade Advisory Council
- Member Trade Policy Advisory Council
- White Paper Advisory Panel on Foreign Trade (Australian Government)

- Patron, Cystic Fibrosis, WA 1991- 2008

- President of the Australian Chamber of Commerce and Industry
- President of the Chamber of Commerce and Industry of Western Australia

Appendix



Letters of John Oswald Clough from the Front

My father shared a remarkable bond with his aunt Ada Walton and throughout the war he wrote a steady flow of letters to her at Windermere Street north. Many of the letters were printed in the *Ballarat Courier* and have been reproduced below:

EYEWATCHFUL GUNNERS

15 May 1915

"The Australians desire to get to the front has at last been gratified, and they have right worthily upheld the traditions of British arms. If you could see the hills upon which we are established you would wonder how we climbed them, how we dislodged the enemy, and how we got up our guns, equipment, stores, &c. It is very hard work this going day and night, and practically under fire all the time. This is being written in our gun pit. Not more than 300 yards from the enemy's lines/ here we feed and sleep, ever on the qui vive, ready to spring to action. I have had several close shaves, but am in good health...."

HUNDREDS OF TURKISH DEAD

9 July 1915

"It is a pretty rough life we are leading now, and we never know when we are going to be called upon to fire. Yesterday was the busiest day we have had since landing. The enemy delivered a very solid attack soon after midnight, and kept it up for about 16 hours. They suffered enormous losses, and did not shift our boys an inch. The gun I was on was in a grand position to do great execution. We commenced firing here before 4 o'clock in the morning, and it was 4pm before we had much of a spell.

It does not matter what part of our front trenches you look out from, you can count hundreds of Turkish dead. Their losses yesterday must have been several thousand, while ours was very light. They are very quiet today, so I am taking the opportunity of writing a few letters. I am still in the best of health. It is a jolly rough life this; no comforts whatever; very seldom get a wash or a shave; have not had a change of clothing for weeks, but all the same, would not have missed this for anything. The Australians are doing very well, and earning much praise...."

BACK TO THE FRONT

September 1915

"Things here (Anzac Cove), are just the same as when I left – very slow, with bullets and shells flying around, compelling us still to take advantage of every bit of cover. I just had a shower of earth over me as I sit in the bottom of the trench writing. The shell hit the bank above, but they don't do any harm if you keep down low...."

(Jack had just returned to the firing line after being slightly wounded. He said that the injury that he sustained to his finger was still troubling him with 'the joints being still a little swollen and stiff.')

November 1915

The men who first landed are being relieved and being given a rest as opportunity permits – their places are being taken by men of the 2nd Division, who are starting to put in an appearance now (11 September). About 25 of our battery are going for a spell tomorrow, and on their return another batch, including myself I hope, will have a brief respite from the din of battle.

Parcels do not come to hand until a month or so as a rule after letters bearing the same date. The parcel of tinned tongue, cake, chocolate, toilet soap, magazine, notepaper, envelopes, and lead pencil was a really good and useful assortment, and the contents could not have been better chosen.

There is nothing sensational happening at present. The occasional burst of rifle fire and artillery duels is all there is to denote that we are still fighting. The passing of the stretcher-bearer to the rear with dead and wounded is now happily very infrequent....

January 1916

We have had a taste of the winter already. The rough weather interferes with our supplies of fresh bread, meat, water &c, and if only for this reason we don't like it very much....

(It was pointed out by the newspapers that not even the 'slightest suspicion was entertained by the men of the contemplated evacuation.')

A RED LETTER DAY

February 1916

I came here three days ago. It is an historic place, for it was here Wolesley defeated the Arabs 40 or 50 years ago.

Yesterday was a red letter one for me. A huge mail was delivered. Four letters from you and two big parcels, including cake, ginger, socks, and a host of other things. They came at a very opportune moment, and were very acceptable. Being in a new camp, things are not in proper working order yet and rations have been rather scarce. We were about a week in Cairo, and had a pretty good time. Slept in a bed, the first time for over a year. I had some real good meals, too. Did not seem to be able to stop eating. We shall be pretty

comfortable here when we get settled down. Have a sergeant's mess. There are eight of us, and we will make a happy family...

It was very hard to leave the position (Gallipoli), which we had so dearly won, but I suppose it was for the best....

(Written from Tel-el-Kebir following the Australians evacuation from Gallipoli.)

KEPT VERY BUSY

17 August 1916

Today is the second anniversary of our going into camp at Blackboy Hill, W.A. It seems like 22, and the war looks far from finished yet. Some writers seem to think it will be over soon; but I am in a very pessimistic frame of mind at present.

I am keeping very well myself. We get it rather hot occasionally, in two ways. Forgive me for not writing more and oftener, but I am kept very busy....

I was unable to post the above, owing to moving about a lot, postal arrangements have been disarranged. I have been promoted to rank Battery Sergeant-Major, and like it much better than my late rank.....

9 February 1917

It has been dreadfully cold for the last month – the coldest experienced, the residents say, for several years. I would sooner have this cold, frosty weather than the rainy, and therefore muddy, conditions. At present the ground is as hard as iron and covered in snow to a depth of 2 to 3 inches. When the thaw sets in I suppose it will return to its original state of mud to a depth of from 6 inches to 6 feet or more, according to the amount of traffic that goes over it.

I had another horse shot the other day: had just got off her back when a shell burst near, and a piece went through my mare where my leg would have been had I been on her back. The shells are much more dangerous when the ground is frozen than when it is muddy. In the former instance they burst as soon as they hit, and spread very nastily, the lumps of ice and frozen earth they throw about being nearly as bad as the pieces of shell. On the other hand when the ground is soft the shells bury themselves several feet before bursting, and a shower of mud is the chief result.

Our OC (Major D.T.Rogers) has been presented with his DSO. He won his honour at the same time as I was mentioned in dispatches. He has been with us ever since the start of the war. He is a real good fellow....

(Sergeant-Major Jack Clough was mentioned in Sir Douglas Haig's dispatch of 13 November 1916 'for distinguished and gallant services and devotion to duty in the Field.' He was wounded in action only days after this letter appeared in the Ballarat Courier and on 9 May was admitted to the 1st Stationary Hospital in England suffering from severe shell wounds to his left thigh.)

A "GOOD YEAR" EXPECTED

June 1917

Everything points to a good year, but don't build too much on it. Even if we succeed in breaking their lines, it is going to be a hard and costly operation; but if we don't beat them this year, we will the next, or the next, or some time. We will beat them alright.

Well, I have been wounded at last, not badly. I had been going that long (since August 1914), and had seen so many killed and wounded. Even the morning of the day I was eventually hit we had a corporal and gunner wounded in my dugout, one on each side of me; two more in the dugout next door. Then the Germans opened out on to our places of abode properly. We got out of the way while he did it, and he knocked our possessions out of all recognition. Fortunately, he did not get our guns, which were a few hundred yards from our camp; but some of them had very narrow escapes. We thought it a wise plan to shift, and we employed the rest of the afternoon in preparing new positions for our guns, and shifting what was left of our camp and belongings. We were to move the guns just after dark; but before moving the Major thought he would give them a parting shot. After firing for 15 minutes Fritz responded and I think it was about the sixth shell that got me. At least it was not the shell, but a piece of it. It burst about 20 yards away, and something hit me very hard on the left thigh, near the groin. It hit me so hard that when the Major asked me if I was hit I said, "Yes, but I think its only a bruise." But when I looked found too much blood for that to be true. That was 1st May, and another fortnight or so ought to see the wound healed up.

The uncertainty of Russia, and Germany's U-boat policy, which she believes is going to starve England, will make the Central Powers hang on to the last, and so long as her food, guns, and ammunition hang out she can wage a more or less successful defensive war, despite numerical inferiority, for a long time yet. It is not numbers so much as machine guns, field and heavy guns, and ammunition that count, although there is a certain limit, and we will have to kill a lot more yet before that limit is reached. There is a lot of talk about Germany's internal troubles, but I don't believe them, or if they do exist she will stamp them out with her own ruthless methods....

June 1917

I am still in hospital, but nearly better, and not a bit lame or likely to feel any effects from my wound.

The parcel you refer to I will not receive, for it will go to the Front. Still, some one will get the benefit.

It is no use stirring up industrial unrest until we have the Germans worsted. We are certainly in for a bad time, industrially and economically, even if we win; but for an infinitely worse time if we lose: and to win we must not be divided. The enemy is very strong yet, and will take a lot of subjugating before we can compel him to make just retribution for the wrongs he has inflicted on mankind. Personally I do not care how long I have to keep going, so

long as we emerge victorious. I am not a believer in war; but I think before a universal peace can be obtained Prussian militarism and all autocracy must be stamped right out of existence. Not until then will the welfare of the poorer classes and the rights of small nations be assured. For the working classes to now strike and agitate for peace before victory is won is, in my mind, to defeat their own ends, and putting a huge weapon into the hands of the enemy, who will use it so long as it serves his purpose, but will discard it as soon as the purpose is served.

You will be pleased to know I have been awarded the DCM (for distinguished conduct in the field medal). I received the ribbon last night. I have not received the medal yet. It will be presented at a later date by some general or the King.....

(Sergeant Jack Clough received his medal on 8 November 1917. The official citation read '...For conspicuous gallantry and devotion to duty. The battery was heavily shelled, causing several casualties. He, regardless of the shell-fire, assisted in attending the wounded and getting them into safety. He had throughout set a splendid example...')

AN ANZAC AT OFFICERS' SCHOOL

12 October 1917

I am getting on very well in the school, and expect to be here a couple of months yet before going back to France. I am having a great spell, and am in great fettle. It is just great after the hard times in France last winter, and Gallipoli the winter before. I can hardly realise my good fortune in having such a long spell. The training is six solid months for lieutenancy in the Gun section, and we have one month at Salisbury Plains to finish our course. If we pass our examinations we get our commission, and then back to sunny (?) France.

There has been a few air raids lately. They were dropping bombs quite close here, but I did not waken. They upset things a bit. Everybody gets under cover. The bombs do not do a great deal of damage, but there is a lot of our own shells falling all over the place. There are hundreds of guns firing at the aeroplanes, and what goes up must come down, so it is not too safe in the open.

Winter is on us, cold, wet, and foggy. I am longing for a bit of warm Australia once more, but am afraid that is a long way off yet. We are kept training and studying very hard, and do not have much time off....

(After receiving his commission Jack Clough returned to the Western Front on 28 January 1918).

VIEWS ON AUSTRALIA'S DUTY

February 1918

I went under the classes alright, in fact easily, although they were pretty stiff.

Had ten days leave; went to Scotland and Stockton; then received commission, and back to France.

The Australians are looked upon as natural leaders in every department of the service. I am proud of being an Australian. I think the pick of the English came to Australia and founded our great Commonwealth, and the stock that sprung from them are worthy of their great courage and enterprise. Everywhere you go you find the Australians are looked up to and respected.

The English are being put to the test on the food question: the shortage is keenly felt. It is either 'go on or go under', and we do not intend it to be the latter. I would not mind a bit of Australian sunshine now; but am afraid that will not be for a while yet....

8 March 1918

There is no news to report as far as meets the eye, everything is the same as when I arrived here a few weeks ago. I fancy, though, there is a spark smouldering somewhere, which will burst into flame at any moment, and then highho for another six or seven months' fierce warfare. I received the parcel sent to Mount Pleasant PO, which took five months in coming. We had the pudding for dinner the same evening; it was 'bonzer'.

17 March 1918

I thought you knew my opinion of the Referendum on Conscription. It is decidedly "Yes". I cannot follow the train of thought of those who vote No. In my opinion the first question to decide is – Are we fighting this war in a just cause? Do the people of Australia think that? If not, let them declare peace, and recall us all. If we are in this war on the side of right, and Australia wants to fight alongside the other nations until right predominates, the next question to decide is the best, surest, and quickest way to attain that end. In my opinion it is not by voluntary effort or methods. The forces of the Commonwealth – and when I speak of the forces I do not mean just those men able to be in the fighting forces, but every man, woman and child in the country – should be marshaled and organised until the maximum effort the country is capable of has been reached.

No slackers should be allowed. Is it right, if we are fighting for our country, that that country should allow us to fight for slackers who are fattening while we suffer? Conscription is the only way whereby we can touch these men. Conscription is to be abhorred; but Conscription to win this war, every time, The only argument I can follow against Conscription is that they want Germany to win, and if Germany wins it practically means Conscription for all the time, for it means that huge armaments and huge armies, will have to be maintained for fear of further German aggression....

(Lieutenant Jack Clough DCM was gassed on 29 March, less than two weeks after writing the third instalment of this letter to his Aunt Ada.)

I am back at the guns once more in the old battery – the 8th – with which I left Aussie in 1914. The battery is not recognizable, there being left only about a dozen of the old originals. Our OC is Major C.B. Stewart, an Adelaide man, who has been with us since we left the Peninsula.

It is an extremely rare thing to come back with a commission to a battery in which you have served in the ranks.

The weather is lovely, quite reminiscent of Australia.

In the ordinary course of events I would have got a few weeks in the South of France to recuperate, but as things are, will have to pull myself together in the lines. I was a bit disappointed in not getting to 'Blighty'. I was marked for it, too.

The growing crops – wheat, oats, corn, clover, grass, poppies, etc – with the trees covered in green, make the countryside look a perfect paradise.

Things have not gone well with the Allies this year, but the turning point is not far off, I fancy....

(Jack had returned to his unit as a full lieutenant after being gassed in March 1918. It was not long before his name was once again in the Casualty List, wounded in action for the third and, ultimately, final time. Suffering from gunshot wounds to his left arm and knee Jack was invalided to England and then repatriated to Australia on 19 October, three weeks before the signing of the Armistice.)

23 July 1918

The war does not look like finishing soon; but we are slowly gaining the upper hand, with the gradual increasing help of the Americans, who are a very likely looking lot, and sure to make good. I've seen a lot of nationalities since leaving Aussie, but the English race is on its own, and the young offshoot down there under the Southern Cross is the best of the best as fighters. There is nothing to touch them. A lot will say they are wild and rough, but they are rough diamonds.

They are combing out all the eligible from the Base jobs. Our two English cousins, although near 50, are expecting to be called up. How their business will get on I do not know.

At the time of writing there has been a lull in the German offensive for a few weeks. It is a very good sign, its significance being that there is a certain amount of discomfiture owing to one reason or other in the enemy's plans. Every day's delay in the renewal of their offensive strengthens our hands, and I see the day not far distant when the initiative will once again pass from them to us, and then the end will be in sight. They might delay the day, but it surely will come, and once the tide turns it might come quickly.

I've been through some hard times, and rough times, too: been like nightmares, but looking back on them I think I would not have minded being through them for anything, and I hope and want to be in it to the finish.

Sometimes I meet old pals of the Peninsula days and Egypt, and we live over again the times. Incidents that in those days nearly made us cry and our hair stand on end now cause us a lot of amusement, and help to while away a pleasant hour.

Have not seen a paper for a week or more, so you probably know more than I do. This I know that you do not know, that we Australians are chock full of confidence in our ability to stop him if he tries to attack our little bit of front. I don't think he will. He has too much respect for our 'diggers' as fighters.

I am looking forward to the time when I will be with you all once more, a time which I hope is not far distant, when we can say, 'Our duty done brings peace of mind.'

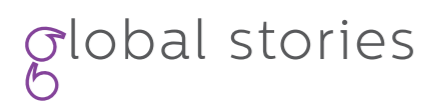
I am 'in the pink', as the saying goes, nearly four years of it now, and all my wounds on the left side...

(Lieutenant Jack Clough was closer to the mark with his predictions of the Allies 'initiative' than he could possibly have known when he wrote to his Aunt Ada Walton. Ada received a cablegram from her nephew on 20 September stating that he had been wounded in the left arm and leg.)

Have just landed today from SS Sardinia. We were to have gone to Fremantle, but a few miles off were ordered here on account of the quarantine station being crowded. Although we had no influenza aboard we are placed in quarantine till Christmas Eve.

This is not a bad place on the shore of King George's Sound, facing the town of Albany. We get plenty to eat and have nothing to do, so we are taking it in the spirit of a holiday at the seaside, rather than an enforced sojourn in a quarantine station....

(Lieutenant Jack Clough DCM, who was writing from Albany, described the efforts to combat the deadly Spanish Influenza epidemic that was sweeping the globe, spread in no small part by the troops returning to their respective countries.)



ABN 61 747 410 514

Email: jaqui@globalstories.com.au
Website: www.globalstories.com.au

Publisher and Editor: Jaqui Lane
Designer: Rasika UM, www.shashika.info
Proofreader: Clare Wadsworth

© 2018 Mimi Packer

This book is copyright. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without written permission.



*I guess I've had a fortunate life
and been extremely lucky.
I've also learnt the secret that
the harder you work the luckier
you get. So I think the two
things are associated.*

MEMOIRS OF WILLIAM HAROLD CLOUGH