Autobiography

Ernest Gilbert Wilson. B.Sc.Hons (1958,Qld), M.Sc. (1965,ANU)
Some members of the family have told me that I have had an interesting life and should write the stories that I have told them. I don't want to write a boring chronological series of events, but will select those that might be interesting.

I have had four dominant interests throughout my life; and they get interwoven at various times:
My family, before and after marriage, Music, Flying and Geology

John Clifton Wilson, My Grandfather

Grandad Wilson was born in UK and according to Dad, ran away to sea in London because they were going to send him to the Blue Coat School. Supposedly he boarded his sailing ship to be met by the cabin boy who tried to fend him off which led to a fight stopped by the Captain, who decided that he would have two cabin boys, and his sailing career began.

After many years at sea during which the two cabin boys and the Captain spent a night in Valparaiso Gaol after being caught in a dingy in the middle of the night smuggling drugs. When the gold rush started in Victoria, he along with thousands of others deserted ship in Melbourne and took off for the goldfields. He made his way north to the NSW goldfields and later still further north as far as Rockhampton. Whether he was a successful miner is not known, although he had considerable savings at one time invested and lost it all in the South Seas Bubble and other get rich scams.

He left Queensland and went to the California goldfields and later returned to Sydney. Whilst waiting for a haircut in Sydney, he came across an advertisement asking anyone knowing the whereabouts of John Wilson who went to sea in ……etc.. Kindly contact his sister in the UK etc. John then wrote to his sister. The best information was supplied my Uncle Arthur, the eldest son, who circulated a letter within the family setting out his understanding of Grandad's early years and some information concerning the relatives in UK.

Grandad Wilson married Anne Butterfield when she was 18 and Dad thought Grandad was 42 at that time, but he always kept his age a secret for some reason. We suspect that he lowered his age on his marriage certificate to 38. The only thing we know about the time from when he went to sea until he married is that he sailed clipper ships from Melbourne around the Horn to UK, and cargoes of tea from China to UK.

Ernest Gilbert Wilson Snr., My Father

Dad was born at home in a house next to the old pub at Kedron Park in 1882. His father owned the hotel and sold it and bought the Wellington Point Hotel and Dad spent his early years sailing and fishing whenever he could get away from doing the chores at home, He was the second eldest of twelve children in the family so there were plenty of chores. When Ben, the youngest was born, Dad was 22 and teaching in North Queensland. I can remember when Ben got married and we had a photo of the wedding party at home, but the two brothers had very little contact. Ben died a few years ago at the age of 96 and gave a dinner to all the relatives he could find; I attended and it was a great reunion.

According to Dad, growing up at Wellington Point was the greatest childhood that anyone could ask for; sailing on the bay out to Green Island, fishing, walking the shores at low tide looking for soldier crabs, hermit crabs, rock oysters, mussels, welks, and digging for yabbies and worms for bait. He was a robust young fella, whereas his elder brother Arthur was slightly built and did not have good health; Dad's instructions were to look after Arthur if ever he was unwell, and ensure that anyone bullying Arthur was taken care of, which I believe he did rather efficiently, though he did not boast of any such exploits

Uncle Arthur and Dad, 1884

Dad's mate was Henry Ziegenfusz and in those days alarm clocks must have been in short supply or non-existent. Henry lived in a large two-storey house; his family were well off and had a maid who slept on the top floor. In order to wake her up, she tied string to her toe and hung it out the window down to the ground so that the gardener could wake her up in the morning with a few gentle tugs on the string. The boys were early risers and on this morning for a bit of fun, heaved on the string and almost pulled the poor girl out of the window and fastened the string and took off. They were then too scared to go home for hours, but when Henry eventually appeared, he got the devil of a hiding.

The eldest on the family of twelve, Arthur, decided to become a teacher and went for the exam and started his teaching career which eventually saw him establish the Gatton Agricultural College and on retirement he was the Principal at Toowoomba Technical College. Dad decided to follow in his footsteps and two years later went to do the exam and was rejected; he was given all the school copybooks and told to go away and come back when he could write properly. His handwriting was excellent from that time on, and he was accepted and sent to his first school, Coolgarra, a tin mining town at that time on the Atherton Tableland that is now deserted and merely contains the stamper mill and is located to the northeast of Herberton.

Dad was Headmaster at Tambo State School when T.J. Ryan became the first Labour Premier. He had a problem there because pigeons droppings on the school roof were being washed into the tank drinking water and Dad complained to the Department. The pigeons belonged to the Doctor who lived next door to the school, and the Department asked the local health inspector who was the Doctor to investigate and he decided the school needed a new tank. The pollution continued so Dad dismantled his 22 rifle and walked down to the Boys Toilet, assembled the gun and shot all the pigeons.

He was Head Master at Milora State School until Beryl and Melva passed Scholarship and were accepted at Brisbane State High School; he was transferred to Boondall State School in 1923 and the family moved to Sandgate.

Mum, Miss Sanderson and Dad, Boondall, 1923

Alvene Wilson (neeStabe), My Mother

My mother Alvene Wilson was born on 15th February 1887 at Caboolture. Her birth certificate shows her father as Carl William Stabe age 34 years. He was born in Pluck, Brandenburg, Germany, and her mother was Whilamena Stabe,(neeBallin) age 27 born in Prenslau, Brandenburg, Germany. Mum was also one of twelve children and the family moved to Zillmere where my Grandfather grew vegetables and fruit and hawked them in a horse and dray around the district and I remember him visiting us at Sandgate. My Mother worked as a Nursing Aid in various hospitals in Queensland.

Ernest Gilbert Wilson Jnr.

I was named Ernest Gilbert Wilson, the same as my father, and a few years later I got sick of responding whenever Mum called "Ernie", and finding that she wanted not me, but Dad. To a spoilt three year old that was frustrating, so I told them to call me "Peter", after my little sponge rubber doll of that name.

I was born at MacDonald Nursing Home at Highgate Hill, Brisbane on 12th August 1923. Dad was Head Teacher at Milora State School at that time; the other teacher being Miss Sanderson. If you try to find Milora in the Brisbane valley near Boonah you will be wasting your time as it no longer exists, although there is a property of that name. I had two sisters Beryl and Melva who were 11 and 10 years old at the time. Like all Mums, my mother thought I was the most wonderful baby on earth; of course she was always right.

I grew up at Sandgate, and attended Boondall School. For ten years, my parents paid for my piano lessons, my teacher being Muriel Crabtree, and I became a reasonably good pianist. I played in all the pubs in England and whilst on leave at the Dowager Duchess of Hamilton's residence "Ferne". Being able to play the piano has opened doors for me that would not have happened otherwise.

After passing the Scholarship exam I went to Brisbane State High School (BSHS) in 1937 and matriculated in 1940 following my sisters who had also attended there for three years to Junior Level before being accepted for Teacher Training. At BSHS I played in the School Orchestra for the school concerts and was the accompanist for the Girls' Choir in1939, and I became a rather poor tennis player, but a good ballroom dancer from after school instruction by Norda Barrington.

The year at Teachers Training College taught me many things including how to prepare drawings and print that helped later in life. The Training College was in the old Fire Brigade Building above Central Railway Tunnel. The building had been condemned and

shook as trains passed beneath the building. I turned 18 that year, 1941, the year Japan attacked Pearl Harbour and conscription was introduced, so I joined the Air Force.

I trained for aircrew in Australia:

Navigation School at Cootamundra, September to December 1942;
Bombing and Gunnery at West Sale, December, 1942 to March 1943; and
Astro Navigation at Parkes, NSW, March to end of April 1943.

We flew in AvroAnson aircraft for Navigation Training, and in a Fairey Battles for bombing and Gunnery.

Fairey Battle

With many others I departed Brisbane on the Willard A. Holbrook on 5th May 1943 and disembarked in SanFrancisco 21 days later, boarded a train and travelled in Pullman Car luxury across the USA for 6 days to Camp Myles Standish in Massachusetts.

Avro Anson

Willard J. Holbrook

Queen Elizabeth I

We boarded the Queen Elizabeth in June 1943 in New York and landed in Scotland at Gourock 6 days later along with about 24,000 others mainly US Army personnel.

I was posted to a refresher navigation course at Halfpenny Green near Wolverhampton, then Operational Training Unit at Wing and Little Horwood near Aylesbury where we trained on Wellington Bombers. The crew included a pilot, Neville Twyford, navigator Bill Bowden, Wireless Operator Reg Williams and Rear Gunner Harry Marchant. My training as an Observer included both Navigation and Bombing and Gunnery, but the RAF in its wisdom decided that it was too much for one person and so all observers were divided into Navigators and Bomb-Aimers.

Wellington Bomber

Stirling Bomber

As my Surname initial was "W", I was in the L to split up into Navigators and Bomb aimers. Z bunch and operated as a Bomb aimer.

We then were posted to Stradishall in Norfolk where we converted on to the Stirling 4-engined Bomber for a month. The Stirling was a big 4-engine bomber that handled like a spitfire at low altitudes, but wallowed like a hippopotamus above 13000 feet and that was far too low for bombing Germany. We were joined by Vince Perret, Mid-upper Gunner and Aircraft Engineer Johnny Johnson.

A quick 1-week conversion to the Lancaster Bomber followed at Feltwell, also in Norfolk. The Lancaster bomber was the perfect mug's aircraft; you could pull off the throttles, lower the wheels and put on full flap and the aircraft would stall and then drop away until it stalled again; if you did that in a Halifax it would immediately flip into a downward spiral.

Avro Lancaster

We were posted to 115 Squadron at Witchford near Ely, flying Lancasters.

Shortly after our arrival there we were transferred to the Australian Squadron, 460, at Binbrook in Lincolnshire, where our commander was Group Captain Hughie Edwards, the most decorated man in the RAF. He later became Governor of Western .Australia.

Group Captain Hughie Edwards

Our Tour of operations started shortly after D-Day, 6th June 1944, and we completed 30 operational flights over German-occupied Europe and finished our tour of duty in October. My skipper was Neville Twyford and we became the best of friends. Our aircraft was Z for Zebra.

Ernie and Neville, 1944

We bombed railway yards in France and Germany, Oil Refineries in Paullac, France, and the Netherlands, Foundries in the Ruhr, Dykes on Walcheren Island, Opel works in Russelheim and the cities of Frankfurt and Stettin, dropped mines in the Kattegat and in a fiord in Norway where the German Battleship Tirpitz was sheltering. The entries in the skipper's log book were as follows:

. 11/6/44 Evereux Railway Yards, 1,400 feet, attacked by JU88 twice and ME109 twice

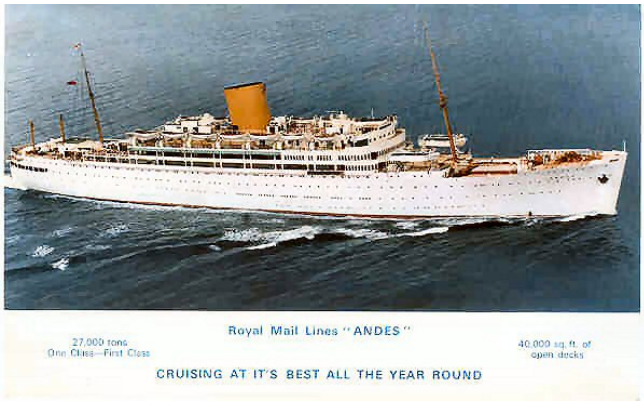
12/6/44 Gelsenkirchenen, Ruhr: Oil Plant, 21,000 feet, searchlights , flak.
15/6/44 Boulogne "E" Boat docks, 13,000 feet, bad weather.
16/6/44 Domleger, France , Pilotless plane Plant, 13,000 feet.
29/6/44 Siracourt, France, ,Doodle Bomb Plant, 13,000 feet, Holes in port and Starboard Inner engine.
30/6/44 Vierzon, France, rail marshalling yard, 6000 feet, uneventful, cloud flying.
1/7/44 Oisement, France, Doodle Bomb Plant, 13,000 feet, uneventful.
4/7/44 Orleans, France, Marshalling Yards, low level moonlight. Fired on Searchlight, bombed at 6,000 feet.
5/7/44 Dijon, France,Marshalling yards, low level, bombed at 6,000 feet, uneventful, hole in fuel tank, landed Woolfox Lodge.
7/7/44 Caen, France , Enemy troops, Heavy flak,4,500 feet
12/7/44 Tours, France Marshalling Yards, bombed 6,000 feet. Saw ME110.
14/7/44 Revigny, France, Marshalling Yards, aborted due to marker failure, returned with bombs.
2/8/44 Chateau Bernapre, Doodle Bomb site, 18,000feet, Uneventful.
3/8/44 Troisy St Maximum, Doodle Bomb Site, Accurate Flak hit Perspex near Navigator, 13,000 feet.
4/8/44 Pauillac – Bordeaux, Oil Refinery, successful, 8,000 feet.
5/8/44 Pauillac – Bordeaux, Oil Storage successful, 8,000 feet, diverted to Finningley.
7/8/44 Fontenay Le Marmion, supporting Second Army, uneventful 8,000 feet.
8/8/44 Aire-France Oil Storage, Uneventful,`12,000 feet.
16/8/44 Stettin, Germany,. Town big fires, flak and searchlights, 17,000 feet.
17/8/44 Ghent-Terneuzen, Belgium, Oil storage, uneventful, 10,000 feet.
25/8/44 Russelheim-Germany, Jumped by ME109 near Rheims, holed starboard tank, losing fuel,, bombed 17,000 feet, forced down at Carpiquet near Caen. Twyford awarded DFC.
5/9/44 LeHavre-France, German Headquarters, 8,000 feet
8/9/44 LeHavre-France, aborted by Master Bomber
10//9/44 LeHavre-France. German troops, 10,000 feet.
12/9/44 Frankfurt-Germany, Railway yards, 12,500 feet, Hit by antiaircraft fire, hydraulics were cut, backing up Pathfinders.
16/9/44 Rheine-Germany, Airfield, 14,500 feet.
28/9/44 Calais-France, aborted by Master Bomber.
3/10/44 Westkapielle-Holland seawall 6,500 feet, flooded the island.
4/10/44 Dropped mines in the Kattegat

On operations we were shot up many times and survived, but after we had bombed Russelheim an ME109 put holes in our starboard fuel tank and we did not have enough fuel to cross the channel. It was after D Day and the allies had invaded France. I spotted an Airfield Identification light similar to those in the UK, so we descended, found a flarepath and landed, but having had the controls to the starboard motor shot away we veered off the flarepath across a paddock and came to a stop. Our Wireless Operator, Reg. Williams, contacted Binbrook to say we were safely on the ground. We considered ourselves lucky as the airfield had only been operational for 20 minutes, the light I saw from 17,000 feet was being tested, the paddock was an uncleared minefield, we had a flat tyre and had landed downwind directly into the path of a Beaufighter taking off in the opposite direction. The airfield was Carpiquet near Caen and we were flown back to UK a few days later.

It took seven weeks after D-Day to capture Caen. We bombed the town on the 7th July 1944 and as bomb-aimer I clearly remember my load of bombs demolishing two blocks of houses on the northern approach to the town, and by the time it was captured, it was a pile of rubble.

Caen recaptured 1944

The Master Bomber on an operation would fly in at about 3,000 feet and mark the target with brilliantly coloured phosphorescent markers; and to divert the attention of the anti-aircraft fire referred to as Flak, other aircraft would fly at about 12,000 feet; and the main force would bomb from about 17,000 feet. We were supporting the Master Bomber as he dropped the markers on Frankfurt and were caught in the searchlights protecting Frankfurt, Stuttgart and Mannheim at 12,000 feet. Dizzy took violent evasive action altering course and height every 16 seconds because that was how long it took for the ground fire to detect your course and height, prime the shell to explode near you and fire. Blinded by searchlights, Dizzy was flying by the seat of his pants for twenty-three minutes as we traversed the 79 n. miles through the anti-aircraft fire trying to evade the flak. We could smell the cordite and the aircraft returned with holes everywhere. During debriefing Group Captain Hughie Edwards who had also been on the raid was laughingly describing the antics of a plane that had been caught in the searchlights saying "I never realised that a Lancaster could perform such aerobatics". Dizzy Twyford raised himself to his full 5 foot 7 inches and walked up to 6 foot 2 inches Hughie, put his finger on his chest and said "That stupid bastard was me!"



The Andes

After our 30th operation up in October 1944 we went to training establishments as instructors. I was posted to Navigation Training School at Llandwrog in North Wales. In June 1945 when the war ended, I was posted to RAAF Brighton and joined a group that boarded the passenger liner/troopship "Andes" in Liverpool and had a luxurious holiday at sea sailing home to Australia via Panama and Wellington, arriving home in late July 1945.

Queensland 1946-1947

After a short stint of teaching at Sandgate Primary School at the end of 1945, I took advantage of post-war University training and enrolled in Engineering and completed the first two years of the 4-year course. I had intended to become a mechanical engineer. I married Melodie Pemberton on 6th December 1947, and found that we could not live on the

scholarship allowance of 5 Pounds a week so I joined my father-in-law's staff as a book-keeper at the factory manufacturing fancy woodwork from Queensland timbers, such as grandfather clock cases, cutlery canteens, jewellery boxes, cigarette boxes and many other small highly polished items. Unfortunately my father-in-law did not think that all sales should go through the books and was selling articles out the back door, pocketing the cash and losing it at the races. I had to find a way out of the dilemma. I quickly polished up my Navigation, obtained a Flight Navigator's Licence in December 1948, and joined my skipper, Neville Twyford, who was a Co-pilot in British Commonwealth Pacific Airlines flying between Sydney and Auckland to Vancouver and San Francisco on DC6, 4- radial-engine, propeller driven aircraft.

Douglas Corporation DC 6

British Commonwealth Pacific Airlines 1949-1950

The crew consisted of 3 pilots, a Navigator, Radio-operator and three Hostesses. Flying time to the USA was 30 hours with stops to refuel at Fiji, Canton Island and Honolulu.

The Navigator, Radio-operator and Hostesses would change at Fiji and take the next aircraft two days later as far as Honolulu. After two days there we would fly to the San Francisco and Vancouver, and on the following day return to Honolulu. The three pilots only staged at Honolulu. As you might imagine it was the best job I have ever had. I resigned in December 1950 because navigators were being replaced by inertial navigation systems, and aircrew life is not compatible with the companionship of married life if your wife is on her own for three weeks at a time and you are only home for two weeks between trips.

. I decided to return to Navigation with my skipper, Neville Twyford, who was flying the Pacific in DC6s with BCPA, and my first trip as a navigator was in December 1948. The DC6 and the PanAmerican Stratocruiser were the first land planes to fly across the Pacific. Initially I was flat out doing the work required for hourly reports. There was no GPS and navigation was by the stars, using a sextant to measure the altitude above the horizon, and from that calculate our position with a general accuracy of about 10 nautical miles. In time I

could do my work in twenty minutes and would spend the rest of the hour helping the hostesses, or talking to passengers. It was the best job I ever had.

The DC6 had a top speed of about 210 knots and flight times were 7 hours from Sydney to Fiji, 5 hours to Canton Island to refuel and another 7 and a half hours to Honolulu. The last leg was about 10 hours to San Francisco where we stayed overnight unless we continued on to Vancouver.

Our aircraft could not fly above 21,000 feet whereas today aircraft fly at 35,000 feet above all the cloud with little or no turbulence. In the Pacific there are two bands of cloud near the Equator, known as the" Intertropic Front" and we avoided cloud if possible. When flying through thunderstorms at night St Elmo's fire would flash around the windscreen, and turbulence would drop the aircraft 5,000 feet in a downdraught, and the next minute lift it 5,000 feet in an updraft and Lightning strikes were common.

When the routine is broken, errors creep in. After leaving Honolulu one night for San Francisco, the skipper used my navigation table as a darkroom to load film in his movie camera, so I went back into the main cabin for over an hour. On my return a compass check showed that we were 20 degrees offcourse because the pilot had misread my course chit. I made the appropriate correction but the diversion should not have happened.

The Long Night

The flight from Honolulu to San Francisco takes ten hours. We take off at 9 pm and the distance is 2,350 nautical miles. During the night I take star shots with the sextant to find our position, but after the dawn there is nothing for me to do, so I have a snooze. We are too far from America to receive Loran radar signals, and the monotony is only broken by talking to the Coastguard Ship "Red Head Fox" on station halfway across the drink.

Coastguard Cutter

One night and I hasten to add that I was not the navigator on this flight, a trainee pilot was flying the aircraft and the Co-Pilot had nodded off. The trainee had four compasses in front of him, a Magnetic, a Gyrosyn, a Fluxgate and a Gyro Compass. He followed the Gyro Compass which precesses, that is it changes course and has to be reset regularly. He never reset the Gyro and he followed it as it precessed 180 degrees and was flying in the opposite direction. Then the Navigator woke up and got the aircraft back on course. They arrived in San Francisco 90 minutes late and one of the passengers was met by a United Airlines friend. He said "It was the most confusing flight he had ever been on. It was the first time he had seen the Sun rise on both sides of the aircraft".

Halfway between Honolulu and San Francisco a Coastguard Cutter with the call sign "Red Head Fox" maintains station in all weather; we would call him and wish him well as he bounced up and down in bad weather.

Approaching California we would suddenly find a US fighter aircraft on our wingtip and give him a wave. San Francisco Airport is in the harbour and when it was closed due to fog, we would sometimes land at Half Moon Bay Airstrip on the coast and wait until the fog cleared.

Department of Civil Aviation 1951-1958

After a short period as a clerk in the Taxation Department, I transferred to the Department of Civil Aviation as an Air Traffic Controller and was based at the Area Control Centre at Archerfield in Brisbane. We controlled enroute aircraft between Kempsey and Townsville and stacked them up on arrival for the Tower Controllers at the airfields from Kempsey in NSW to Cairns. We worked shifts and I was able to continue at the University part-time and study Geology II and Geology III, and with my Engineering credits I completed a Science Degree. I continued with an Honours thesis in 1958 and moved to Canberra to join the Bureau of Mineral Resources as a Geologist.

Bureau of Mineral Resources 1958-1965

I worked at the Bureau as an Engineering Geologist, Hydrogeologist, Map Editor, and ACT Field Geologist. I edited every geological map north of the 26 degree parallel of Latitude. All maps had to join accurately showing the formations as they passed from one map to the next. In some ways, we were regarded as Nit-Pickers but the field geologists were generally appreciative of our efforts. Each geologist had a 250,000 map sheet that covered about 15,000 square kilometres and it would probably take 4 years to complete; in that time his ideas would evolve so that the early mapping of units did not always match his formational boundaries at a later date. I mapped the geology of Canberra in considerable detail at 1: 50,000 scale. During that time the Bendora and Scrivener Dams were built. the latter on the Molonglo River dams Lake Burley Griffin in the Centre of Canberra.

Scrivener Dam

The undergraduate University of Canberra was established as an adjunct to the Melbourne University in 1960, and I became the first part-time post-graduate student there and completed a Masters Degree in Geology in 1965 shortly before it became part of the Australian National University. It was only after that that I considered myself to be a competent geologist who could be dropped down anywhere in the world and feel at home with the local geology.

Department of Defence 1965-1972

I was still a Grade I Geologist in 1965 partly because I was unable to undertake fieldwork in Northern Australia and be away for six months each year because of sickness in the family. I transferred to the Joint Intelligence Organisation in the Department of Defence where I worked as a military geographer during the Vietnam War. The work involved detailed photo-interpretation as well as a watching brief on the economic geology and developments in South East Asia, Indonesia and New Guinea.

cross the border. The border was only five survey points along the boundary from south to north In 1970 Papua New Guinea was still administered by Australia, and the Indonesian

Army was chasing West New Guinea dissidents a and it would have needed a surveyor to find them. The Australian Government decided that the border area should be mapped and I got the job. Earlier maps had no contours; the mountains were coloured brown from which rivers emerged, but they were vaguely drawn and completely useless on the ground. Australian Army officers had been leading patrols throughout Papua New Guinea for years and kept excellent logbooks and had drawn maps as they visited the villages and helped train villagers in health and hygiene. Their reports were invaluable.

The Bureau of Mineral Resources provided the basic graticules for the maps. Air photos were available but there were no survey points on the air photos that would allow the interpretation to be placed accurately within the graticule. Another problem was cloud cover in the mountains. The only way to fill in the gaps, if not with the greatest accuracy, was to fly up the valleys below the cloud, and take photo overlaps with a 35 mm camera. I went to Vanimo on the northwest coast and Bill Hutchison flew me in a Britten Norman Islander twin-engine aircraft to the highlands where we flew up the Om valley, and then crossed over the divide to fly down the mountainous valley of the Strickland to its junction with the Fly River.

Britten Norman Islander

He later flew me to Port Moresby, but on the way we had to refuel at Wabag, and descending into Wabag beneath cloud we had to find the pass between Telefomin and Wabag. As we flew just under the cloud looking for the gap into Wabag with the treetops glimpsed through gaps in the cloud, I experienced the most frightening experience of my flying career. We found the Gap.

Bill Hutchison died a few months later taking a party of geologists and geophysicists into the Nomad Area in a Beechcraft Baron when fog closed the strip he was heading for.

After the border maps, I mapped the whole of Papua New Guinea. The maps were subsequently amended when the Army Survey Corps completed their geodetic work and were published.

I was one of two civilians in Defence who were included in the first Defence Force Staff College Course in 1970 for an intensive two months that included visits to a number of major industrial complexes, a day aboard the Guided Missile destroyer “Sydney”, now submerged off the Australian coast, and a trip by Hercules to New Guinea, then Indonesia as a guest of the Indonesian Military, and Singapore as a guest of the Singapore Army. I met a number of the Royal Australian Regiment Colonels who had commanded the battalions in Vietnam and

have the greatest respect for their leadership and concern for the wellbeing of those they commanded.

Bureau of Mineral Resources 1972-1981
In 1972 I moved back to the Bureau of Mineral Resources and was in charge of the Engineering Geology and Hydrology Section until I retired in 1982. In 1974 I attended the International Rock Mechanics Conference in Sao Paulo in Brazil and the Soil Mechanics Conference in Denver USA. The post conference tour in USA included visits to a number of famous landslips and rock avalanches in the Rockies. In Brazil we were based in Sao {Paulo and visited Brazilia , 850 km north of Sao Paulo. The road trip to Brazilia was identical to that of western NSW, flat red soil plains with a laterite profile and low flat topped mesas rising from the plain and eucalyptus plantations introduced from Australia.

Canberra expanded considerably during this period and the section completed very detailed geological mapping of all the new and projected suburbs for Canberra. The investigation and construction of the Googong Dam, the Tuggeranong Sewer Tunnel and the Belconnen Sewer tunnel were major projects in the period. An outstanding investigation of large swampy areas and the design of drainage for such areas was the most technically complex and demanding task carried out by Jim Kellett who developed hydrogeological modelling to an advanced state and was later responsible for modelling of the Murray-Darling Basin and the Great Artesian Basin, compiling the results, and preparing the publications.

Post 1981
I retired in August 1981 and worked on the siting and construction of water bores in a working partnership with Charles Braybrook, a Geophysicist who prior to retirement headed the groundwater section of the Northern Territory Geological Survey and was responsible for providing water bores throughout the Territory. He was highly regarded for his work, and I consider him to have been the best groundwater geophysicist in the world. Charles Braybrook died in 2009.

In a lighter vein, I was walking with a walking stick down to the café in Orange County one morning and was passing another old character hobbling up the hill on Canadian crutches and I said “G’day” as we passed. He stopped and said “You’re Australian” and that he had been the Supervising Engineer in the construction of Pine Gap in central Australia where Antennae eavesdrop on everybody else’s communications. I replied and said “Yes and you had a lot of trouble earthing your antennae”. He said “How did you know?” and I replied “Charlie told me.” “You know Charlie? “ “He’s my best friend”. Charlie at that time had been the Chief Geophysicist in the Northern Territory and had met the Engineer in Alice Springs where he complained that he was having trouble earthing the Antennae. Charlie took a drilling rig out to Pine Gap and drilled 300 feet down to the water table and dropped in bags of copper sulphate and said “Now drop in your Earths” and everything worked.

I ceased consulting in 1985. After Melodie died in 1992 I moved to Brisbane, and was not active in the geological sphere in any way.

In 2009, I discovered the University of the Third Age (U3A) and attended some courses, and as they did not have a geology class, I commenced as a Geology tutor in 2010. This raised the question of what to teach with no rock, mineral or crystal samples, no microscopes etc. I decided they would want to know how the Earth formed and how the landscapes we see about us came about and did it for two years.**

Plate Tectonics

I could understand the expansion aspects of Plate Tectonics with the widening of the Atlantic Ocean about a central fault where basalt was extruded on to the ocean floor and thickened to form the mid-Atlantic Ridge. However, I could not understand "subduction" where the oceanic crust was supposed to disappear beneath the adjacent continents in the Pacific and other oceans as I could not see any evidence of structural compression in the adjacent continental crust; whereas when India impacted Asia it threw up the Himalayas, and Africa impacted Europe and formed the Alps. I decided someone must have sorted this out in the last 30 years and found papers presented at a Conference in Cairns in 2008 "When did Plate Tectonics Begin". Two rather surprising statements gained my attention; "Plate Tectonics is proven", and "The Earth is the only planet on which Plate Tectonics exists.". Concerning the first I have not found any hard facts on the Earth's surface or on the sea floor to show that Plate Tectonics is proven, and the second statement seemed to be on a par with statements such as "The Universe Rotates about the Earth", and that seemed a bit old fashioned these days. My further reading gave no explanation of the basic assumption that underlies Plate Tectonics that the Earth has retained a more or less constant radius throughout time. I decided to gather all the factual information I could find and see what eventuated.

Basic Assumption

The assumption that the Earths radius has not changed is based on the Equivalence Principle derived from General Relativity. The Equivalence Principle has been challenged by satellite experiments.

GPS is based on Lorentzian Relativity and not General or Special Relativity, and experiments measuring the velocity of Light have found that it changes as the direction of measurement changes (Reg Cahill, Adelaide Uni. 2006). The measurement of most physical constants are accurate to 0.001 per cent whereas the Gravitational Constant shows a much greater variation of 0.05 per cent that is no better than that achieved by Cavendish in 1789. Zavier Borg of Blaze Laboratories considers that measurements of the Gravitational Constant have been accurate and measure gravity according to the velocity of the Earth through Space at the time of measurement.

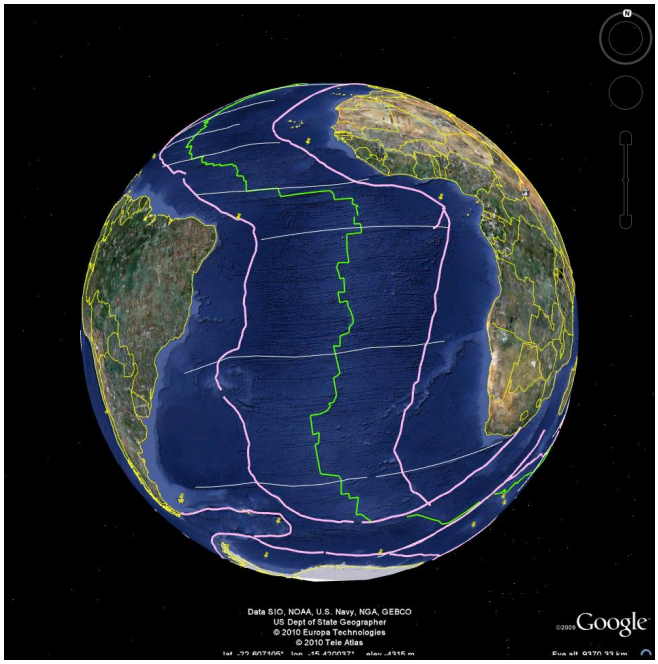
The Earth takes a year to revolve around the Sun 30 km/sec and the Solar system revolves around the centre of the Galaxy (Sagittarius "A") in 226 Ma at 250 km/sec. If the direction of rotation of the Earth is the same as that of the Galaxy, then the velocity of the Earth is 280 km/sec, and if the Earth is moving in the opposite direction the velocity is 220 km/sec. It follows that the Earth's velocity increases for 113 Ma and decreases during the next 113 Ma. The relationship between Velocity, Mass and the Gravity is as follows; Mass increases as Velocity increases and Gravity decreases as Velocity increases. As Gravity decreases the Earth expands for 113 Ma and then contracts for the next 113 Ma. (Borg, 2008). Velocity is currently increasing and Gravity is decreasing therefore the Earth is expanding.

Earth's Expansion

A problem for geologists has been to explain the presence of volcanic rock and granites in geosynclines that they believed were formed by compression. We now know that the Earth is expanding and that the crust is in tension because the underlying mantle is expanding and fractures form Rifts with basalt exposed in the valley floor. The floor of the valley rises to restore isostatic equilibrium as igneous intrusions compress sediment against the valley walls forming folds and faults, and minerals recrystallize to form metamorphic rock.

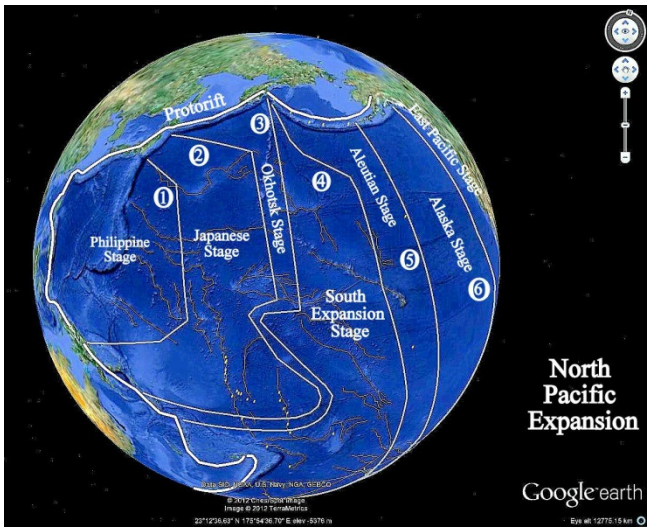
Opening the Oceans

The Earth was a spherical ball with an enveloping crust 200 Ma when increased pressure in the mantle opened two major rifts from the Arctic Ocean to the South along the 40 W and 140 E meridians of Longitude. Large amounts of basalt flowed from the 40W rift as Europe and North America separated and the rift is now the mid-Atlantic Ridge.



Mid-Atlantic Ridge

The 140E rift passes through East Siberia and Japan to New Guinea and was the initial separation of North America from Asia and North America moved to the East opening the Pacific Ocean.

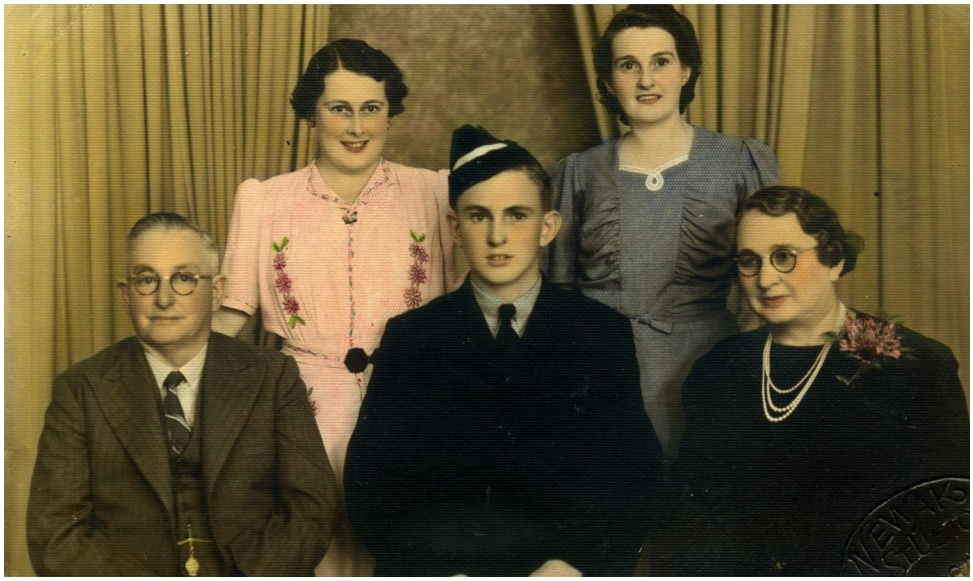


North Pacific Expansion

Opening of the oceans took place over the last 200 Ma in three ways.

1. About 125 Ma ago a major rift in the Earth's Crust from the Halmahera to Hokkaido widened into an ocean over the next 95 Ma as North America moved to the East. Huge amounts of basalt erupted as excess pressure in the mantle was released.
    a. At some time, possibly around 100 Ma, the huge volume of basic rock in the re-entrant between the Philippines and Taiwan became unstable and toppled across the adjacent trench to disintegrate and gouge its way across the floor of the Pacific and the volcanic debris finally came to rest to the east of the Kyushu-Palau Ridge. The bulk of the material at the forefront of the avalanche moved 2300 km and came to rest as the Mariana-Bonin Arc where it sank into the ocean floor to a depth of 15 km and a Trench formed to the East of the Arc.

2.



3.

4. The third process is more complex. It started in the southern hemisphere where the Pacific Ocean formed a V-shaped wedge that ended at a point where Tasmania, New Zealand, East and West Antarctica and South America were joined together. Between the east coast of South America, that at that time faced the South Pole, and West Antarctica, Rifted Basins lay beneath the Amundsen and Bellingshausen Seas.
    a. The Balleny Fault opened between East and West Antarctica; it was a right lateral transcurrent fault and it moved West Antarctica 2300 km to its present position in relation to West Antarctica.
    b. As the move took place, New Zealand pulled away to the East from Tasmania opening the Tasman Sea, between 40 M and the present day; eastern Australia rotated anticlockwise relative to West Antarctica and opened the area to the southwest of Tasmania to the Pacific Ocean, and Pacific-type basalt forms the sea floor of that area..
    c. To the East of the Balleny Fault, South America moved 2300 km to the south and widened the South Pacific Ocean over a period of time starting at 40 Ma to the present. The Pacific Ocean widened as it was pulled apart across a Rift located along the trench adjacent to South America. The Rift extended and widened to become the South East Pacific Ridge.
    d. Faults in the floor of the Amundsen and Bellingshausen Seas were pulled apart as the mantle continued to expand and South America was released from West Antarctica, and right lateral movement along the fault transported South America to the East.
    e. Movement of South America to the East ceased when another right-lateral Fault beneath the Weddell Sea opened up and initiated formation of the South Atlantic mid-ocean Ridge as South Africa moved to the East.
    f. The South East Pacific Ridge now changed direction and opened to the North, intercepting the west coast of North America at the Gulf of California; and an offshoot of the Ridge, the Chilean Ridge, intercepted the coast of South America.
5. When an expanding ridge intercepts continents such as South America and North America, the expanding stress from the Ridge is transferred to the continent where the Stress is accommodated by rotational movement along pre-existing faults.

a. In the acute angle of interception in North America, ridge expansion backfilled the Central America Trench to the north of Guatemala. In the obtuse angle of interception north of the Gulf of California, Ridge expansion dragged the inner slope of the North American Trench over 400 km to the West.
b. The acute angle of interception of the Chilean Ridge with the Chile Trench backfilled the trench to the south of Santiago, and in the obtuse angle to the South of the intersection, the inner slope of the trench was pulled over 400 km to the West.

6. Similar processes to the above separated India and Australia from Antarctica.

The three processes are:

1 Rifting of the continental crust;
2 Rifting in a pre-existing Rifted Basin where the Rift is on the seafloor.
3 Transcurrent movement in Polar Regions after faults have been pulled apart by polar expansion.

End.

This work cannot be published without co-author input to cover the geophysical processes involved, and the changes in petrology and mineralogy that would be caused by such a sequence of events. Without co-authors in those disciplines it would be laughed out of existence and would never be accepted for publication.

Ernie Wilson.