AN INTERVIEW CONDUCTED BY BERNARD O'NEIL WITH JOHN FEAGAN OF THE ELMS, WALKLEY HEIGHTS, SOUTH AUSTRALIA ON THE 24TH OF FEBRUARY 2004 IN REGARDS TO THE HISTORY OF THE DEPRTMENT OF AGRICULTURE IN SOUTH AUSTRALIA.

[Square brackets incorporate corrections supplied by John Feagan in April 2007.]

[0:30] OK John, thanks very much for being involved in the project. Perhaps if we can just start with a little bit of your background, early boyhood, early education, some of those early experiences.

Right, thanks Bernie. My forebearers came out from Ireland, Inneskillen, in 1840 and believe it or not I'm only the second generation Australian. My grandfather arrived here at 6 months of age in 1840. I was born in Ashford, New South Wales which is close to the border of Queensland, west of the Great Divide. I went to a one-man school at the age of 6 where the teacher, a Mr Darcy (who accidentally shot himself in the lungs some time later pulling a gun through a fence), used to teach from Grade 1 to Grade [6] all on the one blackboard so you sat down with your piece of chalk and stencil we had in those days and you just followed the lessons. I kept on following the lessons as they went from Grade 1, 2, 3, 4, 5, 6. When my father died of acute appendicitis, when I was around about 8, we headed off for the city, Sydney, and we arrived there in 1935, yes '35.

Perhaps if you just put down your date of birth

The 11th of April 1927.

So that would make it about '35.

About '35, '36. My mother took me up to local primary school and the headmaster said, 'In what class is your son in?'. I remember my mum saying, 'What class were you in John?'. I said, '1 to [6]'. The headmaster said, 'What do you mean?'. I said we had one teacher and he taught Grades 1 to [6]. 'Well, what grade were you in?'. I said, 'I was in 1 to [6]'. So they gave me a test and they decided to put me in what was called the Primary Final Year. At the tender age of 9 I did my Primary Final and went to high school. My mother, of course, being a simple soul didn't realise that was a piece of sheer idiocy, but it happened.

I went on and did my matriculation at the tender age of 15. While I was waiting to see whether I could get into university, because I wanted to do a university course, I went and worked for a bank. I got into trouble on my first three days there by coming to grips with the manager as to the fact that I wasn't hired to sweep floors, I was hired to learn banking and I didn't last very long. However, I won a scholarship to the university and a bursary. I got a maximum pass for the matriculation, except for French, I wasn't a very good scholar and you had to have French to get to universities in those days. I went and did Agriculture.

Before we discuss that, perhaps we should back track a little bit on your education there. You were saying that at age 9 or so you were going to secondary school …

Yes. I went to North Sydney Boys High School, or Falcon Street as it was called. I had some excellent teachers. Nobody ever asked how old I was until … I remember the first day I went to university I was still in short pants. My mother still had me in short pants and long socks because I was still a boy! It was all very much a mistake: no-one should go to university at that age. However, I got through university.

What had have been your interests at school?

When I was at school I was very interested in the usual things that boys are – cricket and football. I was very lucky. I [knew a bloke] called Bill O'Reilly who taught me how to spin bowl. Those of you who mightn't know cricket, Bill O'Reilly was a legend leg spin bowler of the '30s, he'd played with Don Bradman. Bill O'Reilly taught me the magic of the wrong 'un and the over spinner and the leg break and how to mesmerize a batsman out. I became quite a good leg spin bowler.

In school boy cricket?

In school cricket, yes. I won the bowling average a couple of times. Football I tolerated because I always had a great reverence for my body. The thought of getting it hurt always used to frighten the hell out of me so I was known as 'Quick Pass Feagan' because no sooner had the ball been passed to me in this Rugby Union than I had passed it on so that somebody else would get tackled! (laughs)

So your football was Rugby Union?

Yes. I enjoyed Rugby Union. It didn't have the publicity it has now with the Wallabies international side. It was a strictly amateur game and was considered to be only played by the strict amateurs and not the professionals who played Rugby League. They're all professionals now.

Outside of sport, were you interested in other boyhood things like going hiking around or …?

When I was a boy of about 6 I lived in this place called Ashford as I said. Me mate and I (me mate was the son of the only policeman in town) were rather adventurous fellows. We heard my father once say aloud, 'I'm not going to pay the Council rates. They're absolutely outrageous'. We decided that we'd help dad by burning down the Council Chambers which we attempted to do and we spent the night in the lock up for doing it. We then decided to run away so we grabbed some food and our shanghais and off we went until my mate said, 'Can you hear a Bunyip under the ground?', because a Bunyip was a mythical Aboriginal monster which we all heard about when we were kids. We were so scared we ran home again. I remember that. On another occasion I snitched a firecracker from my mother's shop. She ran this shop after my father died for a year, before we went to the city, and she sold firecrackers. I got this thing

called a basket bomb and we put it under a kerosene tin, lit it and ran away to see it go 'bang'. It didn't, and after about 3 minutes I crept up to it and lifted the kerosene lid and it exploded and it filled my eyes with gun powder and all sorts of things. I nearly lost my sight. I must have shut my eyes instinctively and it burnt holes in my eyelids! (laughs)

You were pretty lucky.

A very lucky boy.

Quite a few boyhood pranks?

Yes, a few boyhood pranks but I had a very happy childhood. My mother was very good. I can remember when I first came to the city; the poor dear died of cancer when she was only 65. She was well over 40 when I was born. I was the last of the brood.

So you had brothers and sisters?

I had one brother and three sisters. My older sister was 16 years older than I was. She's dead now. She was a school teacher. My older brother went and did forestry and he became a forester. My middle two sisters didn't get any sort of an education. My father dragged them out of school when they were 13 or 12 and put them to work because that was what happened in those days. One got a job as the telephonist in the local post office, which was a plug-in job in those days, and the other one did domestic work and worked in his office. He was a failed farmer who became an estate agent.

So you grew up in a family situation even though your father had died and …?

Very much so, yes. I had a very, very supportive mother who wanted us to be educated and so we got educated. I had a wonderful mentor at university. His name was Jim Vincent, Professor Jim Vincent. He was a microbiologist. So I concentrated on microbiology during my university career, the undergraduate career.

[11:25] What made you chose agriculture as a field of study? Were you interested in soil?

Not so much that. I was born in the bush. My father had had a farm, which he lost (went broke on). My mother wanted me to do medicine and I qualified to do it but I wasn't interested in medicine. The thought of blood and gore used to turn my face quite white.

So medicine was one option that your mother had in mind for you, but you had other ideas?

My brother was doing forestry and the reason for that was that he got a scholarship to go to university from the Forestry Department who paid all of his fees. When I went to university, I won the university bursary which paid my fees and gave me a small allowance. Then in 1943 or '4, I can't remember, the Commonwealth government brought in the Commonwealth Scholarship Scheme. I applied for it and was successful in getting funds for that, so that funded my way through. So I could make a choice of what I would do, but I decided on agriculture. It

appealed to me, the idea of doing something to do with farmers. I didn't know what I would do with farmers but doing something.

Might you become a farmer yourself?

No, I never had that inclination. I used to see how hard farmers worked for how little return they got and I thought there must be an easier way to earn a living than being a farmer. They didn't have the technology they've got today to help them. It was hard work, 7 days a week.

Small blocks.

Small blocks, that's right.

It was a bit of a stab in the dark then?

A bit of a stab in the dark. I might have done engineering, I was good at maths. I might have certainly done medicine. I suppose if I had done medicine I might have been able to live in a bigger house, who knows! (laughs)

What did you perceive for Agricultural Science?

The years that I did Agricultural Science it was a straight out general course. The specialisation in agriculture at the undergraduate level only occurred probably from about the late '50s, early '60s onwards where you could pick animal husbandry or plant industry or whatever. There was a [fixed] set of subjects for the whole four years. Then you could do a Honours year in which you could specialise.

Did most people go on to the Honours year?

No, maybe 10, 15%. In my case I got a thing called a research fellowship which the New South Wales Milk Board funded, because by that time I had got interested in microbiology. I did microbiology in my third and fourth year, which was part of the course and I was very attracted to the idea and I loved looking down microscopes and things like that. So when the Milk Board established this fellowship thing I applied for it and I got it, so it meant that I was then locked into doing microbiology and dairy microbiology. Because we were required to develop systems that the Milk Board could use for testing the quality of milk and so on, we did research into that area. I worked with a chap called Bob Morton. Bob Morton was a returned serviceman who came back to the university to finish his degree. He was an extremely bright fellow. He ended up being a Professor of Biochemistry here at the Adelaide University and then blew himself up with acetone and killed himself when he was a not-so-old man in his 40s. It was a sad accident, but it was an accident waiting to happen the way he used to work in his laboratory.

Somewhat primitive conditions?

I remember once we were doing some work together at Sydney University and the bulb thermometer was called a toluene temperature thermostat. That was a piece of blown glass that had a blind bulb in it and you had to heat this glass up to a high temperature in oil and then you

poured toluene into it by chilling it so that it caused a vacuum suction. The trouble was that the toluene was quite hot and inflammable. I had to hold the thing and I remember on this particular occasion Bob was pouring it too quickly and it just ignited with a cloth near a Bunsen burner and I ended up with a rather severely burnt hand. I promised him I'd never do that again, but that was just one of the things that happens I suppose when you're doing research.

[18:30] I went on to develop the methods the New South Wales Milk Board use for testing milk for it's quality – a thing called a modified methylene blue test, which I published some work on. Then when I'd been four years being funded to do this research, my wife decided to have our first child. She asked me a simple question, 'How are we going to feed the little bugger?', because the amount of money you got on fellowships was about the dole, it was not very much. This letter arrived. It was from Victoria and it said, 'Would you be interested in becoming the Senior Dairy Microbiologist at the School of Dairy Technology, Werribee'. I had never heard of the School of Dairy Technology, Werribee. I had never heard of the author of the letter who was the Chief Dairy Officer of Victoria. I was intrigued. How did he know about me or why had he written to me. Then I remembered that there was a fellow down there called Itzerott whom I'd had discussions with at a conference on microbiology. So I wrote a letter to the Department addressed to this chap Itzerott, please forward. I waited and then about two weeks later I got a letter back from South Australia and it was from Graham Itzerott. He said, 'I've just accepted a job in South Australia and they asked me whether there might be somebody interested and I remembered talking to you and so I gave them your name'. (laughs) That's how it happened! So they paid me for an air flight down to look at the job. It had two things that made it absolutely imperative that I took the job. In Sydney we were living in one room with a baby. The job at Werribee had a house with three bedrooms; it had free electricity; it had free water; it had free this; it had free that. Of course, in those days graduates were as scarce as hen's teeth. You've got to remember this the '50s (this is 1951): there were probably five jobs for every graduate. They offered me a salary 2½ times what I was getting, that was the second thing. So I had no option. I said 'Yes, I'll take the job thank you very much!'. So at the tender age of 24 I went there.

[22:00] By the way, a small back flip. How did I get married? Well, I had become a rower by this time. I had been persuaded to row and I ended up being a fairly reasonable rower. I won an international race in world record time, so I became reasonable.

At university?

No. I was at the university working, but this was the North Shore Rowing Club. The mate whom I used to go fishing with who lived at Waverton where I lived with my wife … I started before I was actually married. I started when I was about 18. After I graduated I [kept on]

rowing. We were [one of many crews] trained by Professor Cotton and his guinea pig scheme, which was a new technology of the fact that there was a thing called mental tiredness and [physiological] tiredness. [Physiological] tiredness was caused by accumulation of lactic acid in the muscle system and you could build up resistance to this and you could also lower the rate at which you increased it. He put us through these barriers of the so-called 'God I'm tired' to where you actually were tired and you couldn't actually lift your hand. He taught us to row at rates which were unthought of. We rowed 15 000 m which was this marathon we won in world record time and our rating never got below 25 or something like that or 26 in a Four. We rowed like that non-stop for 50 minutes or whatever it was.

Flying along.

We were flying. We won by about 600 m (or yards in those days). (laughs)

Where was that event John?

It was in Sydney.

Was it an international competition?

It was an international competition, yes. A lot of fun.

Is that where you met your wife to be?

I met my wife-to-be because her younger brother was a rower. He said to her one day, 'Come and I'll introduce you to some real red-blooded men', because she was going out with … I don't know who but it doesn't matter. So she came to the rowing club and I met her. We got to know one another very quickly and we actually eloped. We went to an office and got married and she went back nursing and I went back home and nobody knew about it! We were 21, God help us, 21! (laughs)

A marriageable age then.

The silly things you do in life. So we've been married 56 years now. So that was the reason I went to Werribee because I had this daughter 6 months old, and we needed a house and we needed more money to live. I think I took £20 to Werribee, that was my total value in those days.

[25:45] Just to come back a step John before we continue the Werribee. You completed your Honours degree?

No. I completed my Masters degree. I did the exams, which was called the Honours exams, and passed those but because I left to come to Victoria in that period and wrote up my thesis (which also included some research from Victoria as well) … It took me a while to write my thesis because I was too busy doing research …) so I got my Masters degree. I got my ordinary degree and then I got a Masters degree. I did the year of – there was a minimum of 1 to 2 years to do an Honours course in Sydney in those days and you could convert it to a Masters course

and that's what I did. So I did all the exams you were required to do and then I was to write my Master's thesis to get the degree.

So the fellowship covered you for the Masters component?
The fellowship paid me money to do the research and all that at the university.

Over about four years or so?
Yes, four years I was there. I was there from, what was it? '48, '49, '50 I was 3 years there. No, it was the end of '51, nearly 4 years. It was about March ['52].

The birth of your first daughter was in ...
September '51.

So you went down in what, March '52?
'52.

[28:00] OK. Let's pick up on the story on Werribee.
Werribee, I was there for 14 years. I was never a vertical-thinking researcher. I was always a lateral-thinking researcher. I was taught to be lateral by Jimmy Vincent who said, 'If you're going to do any good in research you must always take all the blinkers off and look sideways'. I always did that. So I didn't just take bacteria and work with it. I did other things like I developed a dye marking of antibiotics back in the late '50s, early '60s which became the technique used throughout the world for preventing antibiotics getting into human milk supply, because I coloured the antibiotic in a way that ensured that there wasn't any antibiotic in the milk because they used to stick it in the udder of the cow to kill mastitis. They'd be able to detect the colour and the farmer could do that and reject the milk. He could feed the milk to his calves (it wouldn't hurt them), but he wasn't allowed to put it into supply. In fact, we developed very sophisticated techniques for detecting the dye. We could detect it in as little as one part in 60 000 000. We had resin extraction techniques that we developed. That became an interesting feature of my research. I also worked on cheese.

[30:00] Had you been engaged to do that sort of research?
I was engaged at Werribee to teach dairy microbiology and to do research in dairy microbiology. Because we taught cheese and butter-making courses, the microbiology was less orientated towards market milk and more orientated towards the making of cheese and butter. So I did a lot of research into the bacterial defects of butter and the bacterial problems of making cheese. We did a lot of research on new methods of making cheese, published those. We also did a lot of work, or I did a lot of work, on the way in which milk … heat treatment affected the growth of organisms which were suitable for making cheese. I was able to demonstrate that protein degradation (so I went into protein research rather than milk research) produces certain peptides which were very inhibitory to bacteria. So if you overheated milk you

could cause the cheese-making process to fold up. On the other hand, if you heated it further … These peptides were further broken down into [smaller peptides] and they became no longer toxic and, therefore, the bacteria could grow again. It was very predictable, very predictable. So I published all that and that became part of my thesis.

It was pioneering sort of stuff?

[My interest in dye-marking antibiotics resulted partly from my role as Vice-Chairman of the Hospital Building Committee. Werribee needed a public community hospital. A bloke called Gilbert Chandler was President of the Dandenong Community Hospital. We met at a hospital conference.]

[33:00] **End of Side A, Tape 1**
Tape 1, Side B

[0:05] ... [Chandler] was also the Minister of Agriculture. So then a story burst in Melbourne that all the milk that the consumers were drinking was contaminated with penicillin and other antibiotics, and people were being poisoned right left and centre … Because they had a bit of a crazy at the Melbourne University who wanted to get on the headlines, because his research wasn't good enough to get him on the headlines, so he got on to the headlines by saying that the government was poisoning the people of Melbourne. I was contacted (why me I'm not sure) and they said 'How do we fix this?'. I said, 'You ban penicillin'. Back came the answer, 'Can't deal with it. Farmers have too many votes'. I talked to a mate of mine in CSL – Commonwealth Serum Laboratories – and I said, 'Do we have any food additive dyes which aren't carcinogenic?'. He said, 'There's quite a few'. He gave me a list of them and so I tried these out, adding them to milk to see what sort of colours they'd make. One that really impressed me was one called Brilliant Blue FCF – whatever that meant I'm not sure, but it was a organic food colouring agent. I found that it would colour the milk at very low concentrations. I went in to go and see my CSL mate and we found a method of getting this dye very finely ground in a microniser, so it was really finely ground, mixing it with the oil and the penicillin and we had our experiments in putting it into the udders of cows and then sampling the milk. That was when I invented the quarter-milking machine which I was able to use to separately milk each quarter of a cow – that was a bit of engineering that I got involved in – and discovered that as I measured the level of penicillin in the milk, I noticed it had dropped down and it took anything up to 3 to 4 days for it to disappear out of the milk after the treatment. So the colour of the dye gradually faded. At the time when the penicillin was at a level which was considered to be not critical, the colour visibly disappeared. We did a whole lot of experiments and we came up with the concept of dye marking the antibiotics. The farmers were all going to lynch me, but they didn't and the government quickly passed legislation and, in fact, the Victorian government

was the first government in the world to pass legislation that made it compulsory for penicillin and after that other antibiotics later on, but initially penicillin, had to be dyed with so many milligrams of this Blue FCF per 100 000 units of the antibiotic that was put into the mammary infusion.

What difference did it make to the farmer?

It made him honest. The reason that there were antibiotics in the milk was that the farmer disregarded the instructions on the use of it. I didn't discover that penicillin leaked out of the milk. That was well known for a long time. So the farmer was directed … Because he could buy these [intra-mammary infusions], he didn't have to have a vet to do it as they did in Europe. Australian farmers could buy the antibiotic and treat the cows themselves. The instructions said you treat the cow and you tip the milk out for a minimum of 3 days. Now they'd treat one quarter. But, of course, they didn't have quarter milkers, they had one milker so they had to bucket milk that cow for 3 days and chuck the milk away or give it to the calves or something. A cow producing [10 L] of milk a day, that was [30 L in 3 days] they were throwing away. They didn't like to do it. So they would then just [add the] milk straight in [to the vat along with the antibiotic] … We did surveys of it and there wasn't a tanker of milk that you couldn't detect antibiotics in. Of course, one bad farmer could contaminate the milk of 20 or 30 good farmers that made up that tanker of milk. We published the work and then it went overseas. I didn't think it was that fantastic to do, I thought it was fairly straight forward piece of research but I got better known for my dye marking work than for my protein genetics work which I thought was much better work.

[6:00] The only State that wouldn't dye mark their antibiotics was South Australia. That's another story. When I came to South Australia to the Department of Agriculture here in 1965, I was on the national committee for mastitis control. When I came to South Australia, the local vet Brick Smith, bless his soul he's dead now, said, 'You're off that committee. I'm putting a vet on it. Mastitis is a veterinary matter and you're not a vet!'. I said, 'No, but I'm on the national committee. You didn't appoint me: the Feds appointed me!'. (laughs)

So you stayed.

They had a blue with the national committee. In the end, I went and they sent a vet as well. There were some vets on the committee so I don't know why they [bothered] to send a vet, but whatever. [Smith] wouldn't a bar of [dye-marking], he wouldn't allow it. It wasn't until he retired and a fellow from the Northern Territory become the Chief Vet., Pat Harvey. He said, 'We'll have it as an option. The farmer can buy the dyed one or the undyed'. The manufacturers quickly fixed that. They only made the dyed one. If they made the dyed for everybody in Australia, and the undyed for South Australia, that wasn't an option. They said,

'Right'. They had no option: the farmers had to use the dyed product. [We still extended the research to dye mark] all the antibiotics they used. We just had to work out different formulations. The trick to it all was micronising the dye so that it was in a very fine particle form and it would therefore release out of the oil base (it was floating inside the udder with the antibiotic which was releasing out of the oil base) and it would release very orderly whereas if you had it in big lumps, of course, it would come out [erratically. Micronised dye partidcles were not molecular in size, but] very fine. We had one problem. The first time we made the first product at CSL (I had this mate helping me from CSL), we wrecked the whole plant. Can you imagine they put this stuff into a microniser, it's a special type of grinder and it ground this crystalline Brilliant Blue into this very fine powder that just fogged the whole plant and everything turned blue! (laughs) My name was mud, I tell you. It took them about 3 weeks to clean it up! (both laugh)

Dust powder everywhere.

Of course, we fixed it. Then we just put it in enclosed air so it couldn't get out. I had to laugh. I saw the funny side but they didn't. So I came to South Australia then after 14 years in Victoria.

[9:20] To round that out, you were doing this research work. Some of it was sort of say pioneering, some of it was perhaps just following up …

Other people.

… other people and so on. Was that your real love?

My real love was research. We did some ground breaking work on the microbiology of cheese. I worked with a fellow called Des Dawson who was a chemist. He used to teach chemistry and I taught microbiology. That was our teaching role but my main role was research. We did the first pioneering work on how starter bacteria actually grew on cheese. We developed some technology, again with the help of some engineers, of how to cut slices of cheese so fine that you could actually stain them and put them under the microscope and see the colonies of bacteria in them. We were able to demonstrate that the different starter strain or starter species – there used to be two main species used, *Streptococcus Lactis* and *Streptococcus Cremorus* – grew quite differently in the cheese. *Lactis* grew just like a scatter pattern of individual pairs or little tiny chains of *streptococcus* cells, whereas a *cremorus* grew into big colonies so you'd have a big colony of bacteria in one part of the cheese and then no bacteria at all until you found the next colony. It was the way when the milk was fermenting that they would form these large colonies so when it was coagulated they'd get trapped as big colonies with big spaces in between. We reckoned that that was the reason why the cheeses matured differently, why when you looked at a *cremorus* cheese after say 6 months and the starter was just about gone, that the colonization by other bacteria (like *lactobacilli*, *micrococcus* and so on and a whole lot of other bacteria), they colonized the cheese differently. And a *lactis* cheese had quite a different taste to

a *cremorus* cheese. We were able to demonstrate that. People could then pick and chose their strains according to what type of flavours their customers wanted and so on.

[12:00] They were giving you a head to do your own thing so to speak?
Yes. We were given a head in the sense that the head of the School of Dairy Technology was a fellow called Oliver Saint John Kent. Oliver [had] come down from Queensland. Oliver was a 19th century gentleman. A lovely gentleman straight out of Pickwick papers. You remember Mr Micawber. [Wilkins Micawber, a character in *David Copperfield* by Charles Dickens.] He was a Mr Micawber. A beautiful Mr Micawber he was. I loved the old man but he had no idea. And then we had our heads. We would just say, 'Ollie' (used to call him Ollie), 'Ollie, we want to do this'. 'Whatever, right-oh. Whatever'. So he had to go and seek out our money. The Department didn't give us much because … [break in recording]

We published quite a bit of work because I always believed what Jimmy Vincent said to me was that 'Your research is worth nothing until it runs the test of the referee. The only way it can run the test of the referee is to submit it for publication'. You match the test to the referee and if he says, 'Yes, it should be published' then you've done something. Doing the research itself is nothing. It's putting it down and making sure that what you claim to have found, you have found.

So getting published, getting the results out and about at conferences and in journals and so on …
Conferences, journals and so on.

… you're getting signs of credibility to your name.
Credibility. You're getting invitations. When I went overseas I was well known by most people and I was asked to give a lot of lectures and talks and things like that.

Did you go overseas to give papers at conferences and things?
Yes.

So your name is getting established locally in Australia?
In Australia yes. The Society of Dairy Technology awarded me the Silver Medal for Research twice for my research. I was quite proud of that.

The Feagan name even extends into South Australia then in ...
Yes, I suppose so in a sense. Because I was running Northfield, the job I was appointed to do and then after a few years I started to get into a totally different area of marketing and all that sort of thing and I got out of research. I had a very brief but very active research period here in South Australia which mainly related to quantitative genetics and milk proteins. I worked with a fellow called Lindsay Bailey who was a brilliant young scientist. He died of a brain tumour when he was about 28. He was a brilliant young scientist. Gosh, he was bright. When I look up

there I say ‘Hughie, what’s up with you?’. But we pioneered, at a world level, what was called quantitative protein genetics inheritance. We identified the different variants of say caseins genes, like it might be cappacasein or alphacasein or betacasein or it would be lactoglobulin. These milk proteins had single inheritance genes (so they were simple) and depending upon which variant of the gene they had, the cow had a varying capacity to produce that protein. For example, a C-type betalactogobulin cow could produce about twice the quantity of betalactogobulins then say as an A-type cow. One variant of alphacascein or betacasein could produce a lot more than [another nutrient. The same applied to cappacasein. The genetic variants of cappacasein varied in their quantity in the milk and this affected the firmness of the coagulation – the more cappacasein the firmer the curd, the better the cheese quality.] We published all that work and that became quite … It created quite a breeze. (laughs) In fact, the interesting thing was that I was a very political scientist in the sense that I used to do a lot of the negotiating for money. When I first arrived at Northfield we had [John] Radcliffe, [Alan Hehir] and [Brian] White. That was about it. And Brown was coming on the scene – he was a cadet, the politician [Dean] Brown – and not a lot of funds. So I went out and because I was known I got a lot of dairy research funds and a lot of Commonwealth funds. We built it up to where one stage we must have had 10 or 11 scientists and probably about 20-odd staff. So a big part of my job was to go and hunt money.

[18:20] And we trained our scientists very well. Radcliffe was excellent in that. John did a wonderful job and I praise him so much. He was my Senior Research Officer. We set up what was called (for the first time in the Department) a Dairy Research Committee to vet every project. So you’re a young scientist and you want to do a project well then you prepared the format, the brief, the model of the experiment. You then presented it to all the research staff and anybody else who wanted to, who was interested – we used to do it occasionally, different senior or principal scientists would come and sit in – and we had to demonstrate that that project, the experimental project, met all the criteria of an unconfounded research program. That often would get modified; some of them would get chucked out; some of them would be told to go back to the drawing board and so on. For a young scientist who first came into the group – and we had some cadets who came through the system; I used to say to the head of the Department, ‘I want one of those’ (laughs) and, of course, it would be a young graduate from Adelaide University or somewhere and he was a cadet, in those days they had cadets – we’d give them what was called a ‘PP’, that’s a project on a platter we called it. That was that one of the senior scientists would actually develop the project and get it all ready, coach the young fellow up so that he had to present it (‘Poor bastard’, I used to think, ‘What must he be going through?’). It was purgatory when they do it to poor old fellows, but they had to present it and they’d get the criticism. It was a lesson for them. It taught them to be very critical and objective

scientists. That's why [during the period from 1966 to the 1980s], the bulk of the scientific papers that were published in the Department came out of the dairy group because they were very disciplined and the projects that they did had fairly certain end results. So much of the research that was done elsewhere went on and on and on without ever ending because it would be a person with his workbook saying, 'What do I do today? I'll do these things today'. Then after he'd done that he'd think, 'What do I do tomorrow? I'll do these things). I'm not kidding. That's how some of the research was done. Normally you can do some research that way, but Jimmy Vincent taught me the techniques of doing research.

The logic and the rationale.

The logic and the rationale. And what's called Koch's Postulates. He was a bacteriologist, [Robert Koch]. He set down six [four] steps of postulates that you had to go through if you were going to do a piece of research and come to a conclusion. Don't ask me what the six are now I can't remember them, but they were well known. Kochs – K-o-c-h – I think his name was, Koch's Postulates. When I was at Werribee I did the same thing. I structured the research programs there because people, they were employed to do teaching and in their spare time … They had a lot of spare time because we only used to teach for about 8 or 10 weeks of the year and the rest of it was research time. And, of course, you had all the assistants in the laboratory and other staff who used to help with the teaching. They were available then to help you with the research. When I first went there I discovered people would just sort of sit down and think, 'I might do that'. That's not how you do research. The first step, number one, is that you read what is known in the literature about what you're going to look at. Somebody raises a problem: the cows won't eat or whatever, doesn't matter. Somebody raises a problem. You then say I'll do some research and see if they might like sugar in their tea or what. You go and you search for literature for what's known about why cows won't eat. Nowadays they can press Internet buttons or whatever they do. In my day, you had to go to the abstract literature, very long and tedious and hard work. But Jim Vincent said, 'If you don't spend 50% of your time reading, you haven't read enough'. I used to tell my young scientists, 'You look at your month (I said do it by a month basis). If you haven't spent nearly 50% of your time researching the literature then you're just going to repeat what somebody else did (and maybe not as well) or you'll do the experiment not realising that some vital information already known will help you no end to do what you want to do'. I said it's rough: 50% reading, 25% researching and 25% tidying it up and writing it up and publishing it. So you're spending about a quarter of your time actually at the bench. That was very hard for scientists. They don't like that at all. That's probably the same problem today. Can you think of the amount of literature available today? I don't know how a young scientist can keep up with it because it must pour out in bloody droves. I suppose they've got computers to help them now to sift it out.

You've got to do the hard work. It's interesting you coming from that research background, the research ethos mixed up with that little bit of teaching and trying to train people up and so on.

That helped me when I got into the management side.

[25:25] We've got to the stage where we've touched briefly on some aspects of Northfield, but we're really at the stage where you're coming from Werribee to Northfield.

I must tell you one thing. Because I was dealing with bureaucracy in Victoria in a big way, God they used to drive me up the wall, I decided if you can't beat them you join them. So I went and did a 4-year postgraduate course and did a Diploma of Business Management. My wife wasn't too happy about that because it was every night of the bloody week just about! (laughs) But I enjoyed it, I studied the origin of language, fascinating stuff, fascinating.

This is in Melbourne?

Melbourne, yes. At the RMIT – the Royal Melbourne Institute of Technology.

So it's a course at the RMIT which was to get some extra experience and new ideas?

To understand the bureaucratic mind, because in this course they did a reasonable amount of work called public administration, the history of government. They were going all the way back to the Westminster system, the old patronism/nepotism system to the independent public service system. Right now I could write a book on how we've gone right back to the pre-Westminster system with nepotism. (laughs) It is. I mean we've actually gone the complete cycle in the Public Service. Where is Jan McMahon going to now. The Act in my day (and I think the Act still says clearly) that the Public Service Board (and now it's the Public Service Commission) employs the people independent of the government and sets their salary and conditions right? But who's Jan negotiating with? She's negotiating with the Minister. In my day when the Minister tried to interfere I called a general strike, I told people to get out, every member went out because Brownie tried to interfere in the independent system. He was trying to tell the Public Service people what to do. That was a fabulous funny period I tell you.

We're going to get to that.

I loved that period. That was great, that was great.

[27:15] I look forward to hearing more about that when we come to it.

Sorry.

You were in the Ag. Department in Victoria …

14 years.

Were they supporting you to do this course at RMIT?

No. That's why I did it at night. No, they weren't interested.

You didn't get time off or anything?

No, no. They didn't want to know.

So you had to come down from Werribee to Melbourne?

Werribee to Melbourne, I'd drive down and park at the institute and go to the lectures. I enjoyed it because the subject matter was very good. It was what they called the old time system then where they built you through a system over a period of time. I could go and do an MBA in 12 months or something, but it must just be skim the surface and flip the pages to do it. I can't see how they can properly become skilled in administration in part-time such short periods. I think it's only done that way because universities just rake the money in faster by saying 'Here's your MBA, give us your money. Here's your MBA, give us it'. Maybe I'm being too cynical, I don't know; but in my day the coursework you couldn't do it under 4 years, it was a lot of coursework. A lot of theses you had to produce in various subject matters. It was a lot of work.

A lot of reading …

A lot of reading yes

… a lot of writing?

And writing. I didn't mind it. I quite enjoyed it. It was an interesting course. I wouldn't have done it if I'd found it dull and boring.

You had that and, of course, you had your married life and children.

Yes, all that. I slept about 2 hours a day! (laughs)

Not at work!

No. (laughs)

And participating in the environment at Werribee.

Yes. The hospital committee.

[30:00] And social activities.

And the union. I was a local rep. there too.

Right. You took a lot on at an early stage.

I didn't get involved in the council in Victoria, but when I got over here they'd heard that I'd been on the PSA in a regional situation and the Department … Peter Barrow, in fact, said, 'I've heard about you John'. He said, 'I'm the local [councillor] on the board and I don't want to do it. Would you do it?'. I said 'OK', so I did it. That's when I started my career in the Public Service Association by becoming [a councillor] on the board of the Association.

You've mentioned a bit of an interest in your RMIT course and about politics. Had you an interest in politics when you were at Werribee?

Yes. I was the president of the local branch of the ALP. That was another job. In fact, I was asked to run for the seat of Sunshine once. We had a family conference about it. Sunshine was a very, very strong Labor seat of course. It was all a working class area – they had about a 65% Labor vote. I was on what they called the District Council of the ALP. I'm not sure how I found time to do all these things but I did. So they asked me would I … they were keen to nominate me and put me forward. In those days the Central Council of the ALP selected the candidates. There was nothing democratic about it. I'd been a fairly vocal person against the DLP. I thought they were a mob of traitors within the Labor Party and they split the Labor Party in Victoria. I thought that was dreadful. It was just after that that they suggested … So I had a conference with the family which included the children and I pointed out all the bad things associated with being a politician. I said to my wife, 'You increase the chances of separation by about by about 300% because most politicians their family breaks up'. I said, 'I'm not that keen, not that keen, but it would be an interesting career and I'm sure I could do well at it'. But in the end we decided against it.

I was active politically. Our family was an interesting family. It was divided right down the middle. My father was Country Party (which is now the Nationals). My mother was Labor. My eldest sister was Gough Whitlam's campaign manager. My two little sisters – one was very Liberal (that's the younger one) and the middle one was sort of conservative, although her husband was Labor. My brother was strictly Liberal, very Genghis Kkan Liberal. My eldest sister brought me up ...

[33.43] **End of Side B, Tape 1**
Tape 2, Side A

[0:18] John we had a bit of a pause there to collect our thoughts and get some more stamina. Perhaps we should spend some time now looking at your South Australian experience in particular. An obvious place to start is how you came over to South Australia. You've already mentioned a little bit about Northfield and so on, so let,s pick up on the subject.

Actually how I came here was that I got a letter from Graeme Itzerott (whose job I'd taken in Werribee) saying would I be interested in putting in for the job of Principal Dairy Research Officer? He was creating a new research structure at Northfield because the government had given them the farm, it was government land. So I put an application in and came across for an interview, which they paid for. They paid for me to come across which was nice of them.

This would have been 196…?

1965, the beginning of '65. I went back to Werribee and some 3, 4 weeks later I had a letter from the Public Service Board saying, 'Dear Mr Feagan, We are happy to inform you that you have been appointed to the position of Senior Research Officer (Dairy). We would be pleased if

you could indicate when you are likely to be able to take up this position'. I thought that's strange. So I rang up Graham and said, 'They've made a mistake. They've said that I'd been appointed to the position of Senior Research Officer. The job I applied for was Principal Research Officer'. He said, 'I'll check that'. It turned out that Marshall Irving who was the new Director of Agriculture at that stage (because Strickland had just retired) had thought that the job didn't warrant it being at principal level. So I said, 'Graham, I'm just going to write back and say that I don't accept the job, it wasn't what I had applied for', which I did. I wrote to the Public Service Board and said that to them. I said, 'Well, that's that. We'll wait and look somewhere else', because I may not have told you but the basic reason that I wanted to leave Werribee was that the Chief Dairy Officer in Victoria had spiked all my plans to go to California to do a PhD, which I had funded to go to and he stopped it. I said, 'That's it. I don't want to work in the Department of Agriculture if it does that'.

So you hadn't actually been looking for opportunities to …?

I had been starting to look for opportunities when Graham had written or rang me up, what he did I can't remember.

Had you resigned from the Victorian Department?

No, not at that stage because I had a family to feed and I was going to resign when I had somewhere to go. I wasn't that impetuous. I saw two or three other jobs and I went and looked at them and decided that I didn't like them and didn't accept them although they had been offered to me.

[4:30] Just to clarify one thing, John. You mentioned Graham asked you to have a bit of a chat. This PhD opportunity in America was pretty well signed, sealed and delivered?

It was signed, sealed and delivered. The chairman of the Australian Dairy Board had personally approved my funding. Professor Ed Collins in Davis University had organised me to become a temporary lecturer to be paid money from them. They'd organised my accommodation. We had had preliminary discussions on the research program. It was going through the formal stages of whether my absence of leave for 3 years or whatever it was to do the PhD. That was when it was stopped. I then spoke to the chairman of the Australian Dairy Board and said, 'I've talked to my family. I'm willing to resign and take up the scholarship'. He said, 'OK'. The next thing I got a phone call from him to say that the Federal Minister had strongly suggested that they withdraw their support for me. He said, 'I'm sorry', that's all. I can only assume that it went via the State to the Federal. All my colleagues were absolutely astounded as to why. What was the purpose? I could never work it out other than maybe there was some sort of jealousy, I don't know. I was absolutely dumbfounded that anybody would go to that length to stop somebody going to improve their quality of research that they'd bring back to the Department. I wasn't a loner. The Department had done that many times for their employees …

To others?

… to others in the Department, so it wasn't that I was creating any precedence. So that was the reason why I was looking around.

[7:00] Lo and behold, at least 3 or 4 months, I can't remember exactly, maybe 5 or 6 months, I got a letter from the Public Service Board with no explanation but, 'You have been appointed as Principal Dairy Research Officer for the South Australian Department of Agriculture'. Not [to] disregard the first letter, just a bald letter saying I was. I rang Graham up and said 'What's happening! I'd forgotten all about it'. He said, 'I went and saw the Director-General [sic] and I said that we really should change our mind on this. I must have persuaded them, I don't know. I didn't know they'd made the offer, but congratulations. Are you going to come?'. I said, 'Yes' … what I felt that the job was worth. It was still not as much as I was getting in Victoria, even in the new salary. So I came across just before Christmas. Packed everything into the caravan and away we came with the three kids and the dog.

No family discussion on this one?

Yes. Family discussion and they all agreed that I couldn't stay where I was and I agreed. I said, 'This is a good opportunity. It's a new research station. I reckon I can get some money and we'll be able to go places. It's a unique situation. We're the only research facility in the world (I believed) that integrated dairy manufacture and dairy production research'. Because I've always, after I worked with cows on mastitis at Werribee, I've always believed the concept that milk was a white fluid that your received to do dairy manufacturing research on. I believed that the cow had a big influence on the milk you received by doing dairy manufacturing research. So we had a vertically integrated group of people from animal husbandry to pasture research to dairy technology researchers. I believed that that would give us a wonderful opportunity to integrate the two aspects of research. For example, we were able to ask questions like, 'Does what you feed the cow have any affect on how you can make cheese out of that milk?'. Nobody ever asked that question, believe it or not. No-one had ever asked that question. I was staggered that no-one had. I thought, 'God, I'm not that peculiar' but to me it seemed an obvious question to ask. Boy did we find some interesting relationships between what the farmer did to the cow as to what happened.

[10:40] This is research you did over time?

Research over time. So we came. Now as a little side issue, we nearly went back because part of the deal was because I didn't have … Although we were well paid in Werribee, we had expenses. I had a daughter who I'd sent to a private school because the local high school graduated in pregnant young ladies and I wasn't too keen on my young daughter getting pregnant and so we sent her to a church school in Geelong. So I wanted accommodation to be

provided, and they agreed to that because that was the practice of the day – pay for you coming over and find you a house to live in while you looked around to see if you could afford to buy one. When we arrived I was given the name of a Housing Commission officer. I rang him up and he said, 'Yes Mr Feagan we've got a house we can go out and have a look at now'. So my wife and kids were all piled into this fellow's car and out we went. It was out at Windsor Gardens. It was one of those transportables from Sweden. My wife took one look at it and broke down and cried and said, 'I'm going back to Werribee'. (laughs; wife, Heather, interjects: 'It was a dreadful house'.) I'm not kidding. It had been knocked about. It had a funny wooden structure. You know those old transportables they had?

The timber fibro sort.

Timber fibro, yes. They had asbestos in them and everything. We were living in the caravan park out at West Beach at this stage. I said to Graham Itzerott, 'Graham, we've struck a little bit of a snag. It's about the size of a 20-foot long red gum actually, the snag. They've shown us a house that's totally unacceptable. It's certainly not what … when I did the interview they told me they'd give me a modern house'. He said, 'Oh'. I said, 'Come and have a look at it. You wouldn't put your dogs into it. My wife certainly is not going to live in it'. The Housing Trust thought they'd met their obligation by finding me a house. Fortunately, there was a nice double-brick 3-bedroomed house on the farm which had been built for a farm foreman or something that didn't occur. So Graham said, 'C'mon, I'll take you out there with Heather'. We went out and had a look at that house on the farm at Northfield. Heather said, 'Yes, that will be acceptable'. So we moved into that. It was an interesting start to the program.

That took a little bit of … A couple of weeks or …?

Yes, about 3 weeks while we were out at the caravan park. But the kids were enjoying it, they were going to the beach everyday. They were having fun. Of course, it was school holidays when we came.

[14:10] That was over Christmas.

Over the January period. So we moved out there and then Graham said to me … No, I said to Graham, 'I'm having some trouble with these plant people out at Northfield. They tell me I haven't got an office. I'm a principal scientist, which is the highest level at Northfield, and I've been into the Principal Officer's rooms and they're nice rooms with a bit of space so you can talk to people, not just a little cubby hole, because you've got to talk to your scientists and you'll need a bit of space. They told me that there's none of that available'. He said, 'Oh no, I've got you in here in Head Office'. I said, 'Why?'. Graham said, 'I want you handy so I can talk to you about the research program'. I said, 'I've got to run a research station. I'll be leaving from home and going there and from there I'll go home and the only time I'll go into my office is if my wife wants the car and I've got to catch a bus. Then I'll catch the courier out to

Northfield and come back in the courier so you'll see me at half past eight and half past five', because I said, 'I've got to run a research station. I mean if you want me I can always come into town and we can talk about what the programs might be and so on and what you would like to see happen'. Because Graham was a research scientist – he never published a lot of research but never stopped being a research scientist. Even when he was in his old age he was still running off to research conferences which I could never understand why he would bother.

So he was more administration …

He was a Chief Dairy Officer. Full administration and he had the marketing and all the other things he had to worry about, but he never lost the desire to stay as a scientist. Therefore, he also wanted to be very involved, I was nearly going to say more than involved, but involved in the programs. I didn't mind that so long as he respected who was running the programs. After about 6 months I won the day. I made it very clear to the other principal scientist at Northfield that that was the Principal Officer's dairy because right next to the dairy office they had some sort of plant fellow. He wasn't a principal he was a senior or something. I said, 'You find him another spot. That's my spot and I'm coming up with all my gear on Monday and I expect it to be empty'. And it was. So I put my gear in and away we went and I stayed out there. Of course, I could walk to work now: the walk was good: it was about half a k, about a k. [kilometre].

A much more practical arrangement for you working, overseeing the work out there.

It was important. I also remember I had to learn a lot about the farming side of research. I'd not come from a dairy husbandry background. I'd come from a dairy science or dairy technology, if you like, background. I had dealt with in Victoria and in Sydney where the white milk was fluid that came in a tank. The fact that it had come out of a cow was totally irrelevant! (laughs) So I wanted to get close to my husbandry scientists and John Radcliffe was the senior one. He had an interesting background because he did his PhD in pastures, in rhizobia, nodular bacteria of legumes. He had done that at Cornell? Oregon maybe?

Oregon.

Oregon, that's right. That's where he met his wife I think. I used to go and work on … John Radcliffe can probably tell you his side of the story but he had a great sense of humour. He used to get me out there lumping hay and all that sort of thing. He thought that was great for the Principal Dairy Research Officer to have to lump hay. (laughs) But I enjoyed it. It was a bit of fun. It got me close to the scientist working in that area, to talk to them and to understand about the type of experiments that they did to feed cows and calves and so on. They were out to get production, in other words to measure the level of production. I then saw how we could integrate the two. I first was attracted to the job was because I saw the potential that I could get a vertically structured research program, but I didn't know how it could happen. But after I'd been there for a while I could see how it could happen. The young scientists cooperated

marvellously. I mean there was no jealousy that I had Alan Hehir milking cows. He was the dairy chemist-cum-bacteriologist. He used to run the starter program when I went there: that's the things they send out to the factories to make cheese. It worked quite well. I had research programs which included the dairy geneticist which was Lindsey Bailey, the bright young man who died, and I had Alan Hehir and we had Brian White who had a BSc. He was one of the early ones employed and we were able to do this integrated research work. Cows of a certain genetic type, we were seeing how they produced different levels of proteins. I'd done a lot of work on mastitis and I was convinced, yet again – mastitis, you see what you're in. With all the books on mastitis, not one book back in the '60s when I did my first work in Victoria (because that's where I got this integration thing in my head), not one scientific paper, not one textbook ever related mastitis with cheese. It seemed to me logical to think that, by God, look at the pH of the milk, look at the presence of blood cells and proteins. A lot of things that you got into milk if you had mastitis that you didn't have if it didn't have mastitis. I'd read a paper from Germany once by a fellow I met later on (he was a real character of a fellow, I'll think of his name in a minute) but he was the local professor at the Kiel University.

A German bloke.

A German bloke. He was a vet. He was interested in the cell content of milk, the white cell content, because in mastitis it goes up through the roof. Normally you get 10 000. You get millions per millilitre in mastitic milk. He made a comment that said that, 'High cell count milk, farmers had difficulty in manufacturing with'. He put it down to the cells. He thought maybe the cells or something. That gave me the trigger to think. We did the work then on looking at the composition of that milk and there were some fascinating things I found. I did a lot of research in this area and published quite a bit of work. Some of it started in Victoria and I brought it over to South Australia. That was like the heat stability of milk I found was very much influenced by the mastitic status of the milk. We had started after the war, a huge food program in Asia of what was called recombined dairy milk products. The CSIRO had done nearly all of the work related to this and that was that you made milk powder and you made butter fat and you took those two ingredients to a recombining plant in Asia where they employed the labour. This was the government-to-government contract – they bought our milk powder and they bought our butter fat and they provided the labour and the factory to recombine this milk powder and this butter fat with the local water and made sweetened … added sugar or sweetened condensed milk or evaporated milk. Because they didn't have refrigeration it had to be a sterile product which they could then feed to the mothers who had malnutrition with their babies and so on.

So it's combining two bags back into one?

It was called recombined milk. It was a very big industry. Now they had a huge problem with recombined evaporated milk, that's about a 30% solid material and it's not sweet. It's called evaporated milk. They use it for putting in coffee and all sorts of things. That was that they'd stick the powder in and the butter fat and the water and they'd mix it all together and then they'd heat process it to sterilise it. It would go solid like cement ... They'd call that unheat-stable milk. So they developed a set of tests where they used to take a small amount of that recombined milk, put it into a little McCartney bottle – I don't know if you know what they are but they're a little bacteriological bottle; we used to put a bit of [nutrient] agar in and grow bacteria in.

A special top on them?

It screws up with a rubber seal on it right? They would stick these bottles into an oil bath and run them at about 120ºC and see how long it took for the milk to coagulate. You'd put them on a rack and you would lift them up and look at them. We modernised the whole thing and we used to use a glass file, you'd put the milk in and you'd seal it with a flame and you'd have a little ampoule. We used to stick those into little brackets where you fling them around, look at them and put them back. You could see the coagulum run down the side whereas with the McCartney's job you had to get them out and tilt them up to see whether they were coagulated or not. Anyway, you had a standard test. All I knew was you had to add a certain amount of phosphate stabiliser which effected the pH, sodium phosphates with the NA_2, NA_3 depending on whether they were hydrated or not dehydrated phosphates. That would alter the pH of the milk to bring it to be a bit more acid and that would stabilise the milk. I had no idea why it did it, and so then they could work out that in that batch of milk, per tonne of milk you had to have so many kilograms of phosphate stabiliser. You'd throw that in and then the milk would go through without coagulating. This always intrigued me and the thing was that batch-by-batch-by-batch it would vary all over the place. They had to do it for every batch. They'd have a 1000 gallon container which would be processed at a time or something like that, so every batch had to be tested. They couldn't fill a test one batch and say that's it for the day. Every time they mixed the powder up – I mean they mixed maybe 30 bags of powder all together and then got a homogenous mix of the powder and butter fat and water, they would do a test. It was time-consuming and, of course, occasionally they got it wrong and they'd get cement in the pipes. I came up with a hypothesis that the buffer, as it was called, affected the pH. They didn't even see it as … They just saw it as a buffer that somehow or another phosphate made the milk protein stable, they didn't know how or why all they knew is that they had to add it. I thought this is a pH buffer, it's affecting the pH. My research had shown that milk that came out of cows with mastitis had elevated pH levels. This was because you had a certain breakdown and you got blood serum coming into the milk and that's got a pH of 7.4. Milk's normally 6.8 so

what you were getting was – or even less, 6.6. What you were getting was, well I used to measure it and I'd see it has the most mastitis level in a quarter. I'd get one quarter that had mastitis and one that didn't and you'd measure the pH and they'd go like this. The mastitic quarter would go way up: some of them went up over 7. When I did heat stability on this milk it was wretched, it had no heat stability at all. I twigged that this was the relationship. The answer was don't add phosphate. What you did was you cell counted the milk and you graded it and you put a limit on it. Milk that was above a certain cell count which related roughly to the level of mastitis, the more white cells in the milk, the more mastitis cows in that bulk of cows that produced that lot of milk. That was when I was appointed to this National Mastitis Program and we worked out a whole procedure how farmers could reduce the mastitis in their herds. So I got into the vets game. God, they hated me for that I tell you! They didn't like a non-vet getting into the vets game. We got a protocol on it, we printed it, distributed it, went out and as far as I was concerned the vets could preach it, they all preached the program all right. Farmers were told about how important it was and that was when I was also working on this dye marker. Using penicillin to treat the mastitis, but the dye stopped them putting the milk into supply which was for the human problems not the cheese problems. We developed this National Mastitis Program and I was able to demonstrate using technology experiments with vats of cheese and milk and so on, the cost of having mastitis milk in the program – you were waste, you were adding to ... You can imagine cleaning out pipes that had gone thick with solid milk. Very expensive program to clean it all out and start again, not just the loss of product but the time consumed in regenerating the plant. We published all this work and we said the answer is not … We said buffers were the immediate answer but they're still not always able to secure the product and, secondly, they are a contaminant which you're putting into milk and some people who are purists don't like you putting all those other contaminants into milk. What you've got to do is set standards for mastitis. We got that started in Victoria and when I came into South Australia we got it started here. You would have a cell count standard which farmers had to meet. Now to meet that they had to reduce the level of mastitis in their herds. We didn't develop it. The English did it first and we carried it on. The English only did it to treat cows that were drying off with antibiotics which would mean that when they came into production that they would be mastitis free. We checked that theory out and yes that was right. We used to treat some quarters and not other quarters [all infected with mastitis] and then test them with our quarter milkers. [The penicillin-treated quarters had no mastitis and those untreated still had the disease. The treated quarters yielded very much higher quantities of milk than the untreated. The treated quarter milk was lower in pH and much more heat stable.] We published all our work.

[33.50] **End of Side A, Tape 2**

Tape 2, Side B

[0:05] ... at Northfield, clearly that's one of the programs you were finishing off.

My main task at Northfield was to, in fact, run the Research Centre program by administering and advising to the scientific staff, to do the leg work on getting funds by talking to the appropriate people in high places, and by encouraging and helping the different scientists to prepare their submissions. I always believed that they must do that. I could have done it, but if they did it they believed in it. So they did the submission which I vetted and which the Research Committee vetted as well (the Dairy Research Committee). We then sent those submissions off. I sat on the Dairy Research Committee's Finance Committee which allocated the funds to different research institutions anyway … I was appointed on an Australia basis [not just for SA].

Was that that role that you had in Victoria of …?

No. I had it after I got here. They wrote to me and asked me whether I'd be happy to sit on that committee and I said yes. I was very objective about it. I didn't just say, 'You've got to approve that because it came from Northfield'. I was often asked about the projects from Northfield because I had an intimate knowledge of them. I made it clear to my young staff that we were appealing to people with dollar signs in their eyes: what would solve the farmer problem or the factory problem (whatever it is) so that they could make more dollars? If you are going to put up a fundamental research program (and don't let me stop you), make sure that it has a application to some dollar signs somewhere down the track. In other words, you're looking for a piece or gap of fundamental knowledge which will allow you to solve the problem you're on which is going to help the farmer make more money or the factory make more money. So many of the scientists around Australia were putting up fundamental research programs, universities included, which didn't have any apparent direct application. I don't mean that the research program itself would make the dollar, but it would provide information that they could use elsewhere to make a dollar. I argued strongly while I was on that committee that we should certainly support basic or fundamental research, because you've got to have the basic information before you can do the applied research. If you do your applied research without that information it's 'bucket chemistry': you add a dollop of this and a dollop of that and hope it works, but you don't know why. We got a good reputation around Australia and also overseas as being a [centre] of excellence for research. I nearly cried when it all died and disappeared. I knew it would, but it was a wonderful centre of research. It had some very dedicated people.

Northfield: was it run as a centre in entirety or are you talking more about the dairy side of things?

No. The dairy side was run quite separately to the soils and the pasture and so on. The animal industry function at Northfield was basically dairy. There was a little bit of sheep but not much.

And pigs and so on?

Yes. There was a Pig Research Station which was over by itself. Of course, when I was actively involved as Principal Research Officer or Chief Dairy Officer or whatever, I had nothing to do with pigs. They were there, but we weren't associated with them. I wasn't associated with the soils or the pasture research. There was no coordination of the research programs there. We coordinated what was done within the dairy side but that was it. But I was involved in getting the Department to set up what was called a Principal Research Committee. The role of the Principal Research Committee was all the Principal Research Officers sat on a committee which reviewed the Department's research programs. We always had one scientist who acted as the dogsbody of that committee and who prepared the minutes and did all of that sort of thing. I'll never forget one of the young dogsbodies that I persuaded the Principal Officers to deal with, who I said would do a good job, was Dean Brown. So Dean was appointed. The next thing Marshall Irving, who was a dyed-in-the-wool Liberal, called us up and said, 'You can't have Dean Brown as your scientific dogsbody'. (We used to called them the secretary or something like that.) Somebody said, 'Why Marshall?'. 'He's president of the Young Liberal Movement and therefore he's too close to politics'. (laughs) So I had to tell Dean that, 'That icon of liberalism, our Director-General [sic] thinks that you're too close to the political scene, Dean, being President of the Young Liberals. He thinks you might …' (At that stage it was the Labor Party in power, Don Dunstan was in power) '… be feeding stuff to the Liberal Party'. (laughs) I said, 'I know you wouldn't, but I'm sorry'. Poor old Dean, he was very upset. So we had to get somebody else.

It was a short-lived appointment then?

Yes, which I had to laugh about. That was structured after I had arrived. It did a good job. We were having regionalisation thrust upon us at that time, starting to be thrust upon us. There was this peculiar situation that there was a series of research centres in the bush which was under a Research Centres Branch – a fellow called Chamberlain, who was a vet., ran it. Northfield was exempt from that because I ran that and I was answerable to the Chief Dairy Officer who was answerable to the Director-General [sic]. The Poultry Research Centre was outside that function. Turretfield, Kybybolite, Struan and the one over at Minnipa and the one up at Loxton, all these animal ones were under the umbrella of this Research Centres Branch. The Horticulture ones, they were different again. They were run by the head of … I didn't have much to do with them but my memory says that they were run by the Horticultural Branch under Tom Miller. They were directly run … The ones up … There was a horticultural research centre at … There were a couple of them along the river somewhere.

There might have been important things there, John, but you didn't have much to do with them. But you were all in one department but very much in a, not so much a pigeon hole, but you were focusing on your own issues …

That's right. The concept of this Principal Research Officers Committee was to [oversee] the research programs of the Department and see how we could perhaps improve what was happening. Each of the Principal Research Officers had to report to this committee on the programs of research within … Like the Principal Soils Research Officer, Reg French, he had to report. The Principal Meat Research fellow had to report on the beef research. There was a Principal Sheep Researcher too. The Research Centres Branch was always a bit of a headache for us because Chamberlain didn't want to be involved. He wanted to run it himself. When they got rid of that concept, when regionalisation proper came in which is much later I guess.

Mid '70s

Mid, late '70s by that time, yes. I'd got out of research by then. I was in the marketing side of the industry by then. But the idea was good. For example, we would talk about facilities at Northfield as a whole. So, the soils and plant people were thinking of getting a state-of-the-art machine that would allow you to put samples in one end and it would give you amino acid profiles and things like that. It was called an atomic absorption spectrometer or something, I don't know. It was decided that (they were fairly expensive, they were in the thousands of dollars) there would be one bought for the Northfield Research Centre laboratory and it would be housed out in the Soils Branch, because they wanted to use it most, but everybody would have access to it and there'd be a booking system and all the rest of it so you could use it. We did those sort of things which was a good way to avoid everybody trying to buy one for themselves. That was its main function, to have a look at that type of problem. It didn't have anything to do with that program for research. It wasn't related to that. Each Principal Officer ran his own programs.

[13:40] Were you spending most of your time out there at Northfield?

When I was there, yes. Once I got established at Northfield as the Principal Research Officer, sitting in my office at Northfield (when I wasn't interstate or over in New Zealand or somewhere) I spent all my time there other than when I'd regularly go in and report to Graham. Graham liked to come out to the farm, so I didn't have to go in often – two or three times a year.

They didn't need you there in the first place in the Head Office?

Yes. He used to come out, he liked the trip, and he'd spend a morning or something walking around and then talking to the research officers and he'd have a cup of tea and we might even have a little bit of a meeting because one of the officers was presenting a paper which our dairy research community got together. He'd sit in while one of the officers presented a paper and he'd ask a few questions and feel good. I encouraged him to do it. It was a good thing. Graham

was a very good boss. You talk to John Radcliffe: he has a lot of time for Graham. He was a very good boss. He had his faults of course, like he always wanted to go to places and not send his staff. (laughs) He went to all of the dairy research congresses when he should have been sending his own staff, but that was Graham. He had a real true appreciation of what research could do. A lot of the rest of the Department didn't. I was quite staggered at who was doing research, like diplomats out at Roseworthy (this is not being elitist) but diplomats at Roseworthy were not taught research principles; when you do a diploma you're taught field operations and all that sort of thing, extension work. It's different now, it's a university, but I'm talking about when it was just a diploma course. These field officers would be running all sorts of field plot experiments all around the place: fertiliser experiments, 'Will the rye grass grow better with this or that fertiliser?' and so on. I can remember going on tour a couple of times. I was asked to go and have a look at the research programs at Struan and Kybybolite. They showed me these pasture experiments. I looked at it and said, 'That's confounded. You haven't got replicates, or you've compromised the integrity of that particular group by doing these things'. The reason being was that it's correct to set out a hypothesis. When you're doing … One of the postulates – you state a hypothesis. It's usually what they call a null: that's by doing this, it won't affect that and then you set out to prove that it will. That's how you do the research work. The design wouldn't allow them to test a hypothesis. There was one chap down at Struan (what was his name?), he was a butcher from up north and Marshall knew him quite well because he'd worked in the Northern Territory Department. He was the Officer-in-charge at Struan, a fairly young fellow. He would be involved with the young scientists about the research program, that was fine. He wanted to prove that by doing something you'd get a plus, that it would be the right thing to do, which might be to feed animals or to breed animals, whatever (doesn't matter). He would look at the results and if there were some cows that didn't fit the – or some sheep: no, he dealt mainly with beef cattle – the cow didn't fit the line, he'd just say cull it. The spots on the line were kept, but the ones that were out of line wouldn't. I said, 'You can't do it. If we all did that we'd all get a perfect correlation of line. If we altered the data that didn't fit the line then it wouldn't be true'. I wrote a report to this effect and I got my fingers slapped by Marshall for that. He said, 'Don't tell those people down there what they're doing'. I said, 'I was asked down there to look at it and I believe that they were confounding the results by doing things which were not objective from a research point of view'.

[19:25] In the period before regionalisation did you get out and about within the State very much?

Not a lot because there was a lot of parochialism in the Department about what your dung hill was and what your dung hill wasn't. I'd go on my pastoral visits with Graham. Graham would always ask me to go with him when he went on his tours and we would go on a tour of the

South East or a tour of the north or something or other. A lot of it was 'waving the flag' type thing, rather than … We'd call into research stations as a matter of courtesy and we'd be shown a few experiments. That time I was specifically asked to do it. I would keep my mouth shut, I might say a few things to Graham.

But Radcliffe was also very critical of a lot of the pasture research that was done because he said it was unreplicated plots and trials and things and you can't do research that way. Scientists that did this sort of work wanted to prove that what they were doing was correct, not prove whether it would be correct but wanted to prove it would be and so they would ... There was one fellow, I've forgotten his name now and if I did I wouldn't tell you, but I remember John told me about some experiments he was doing with pastures. He was putting fertiliser on one lot of plots and not putting it on others, but he was picking the best soil to grow the pasture in the field. He was sort of randomly allocating the plots to an area so that they might be on good or bad soil and having replicates which were taking care of all that. He had sort of biased the whole result to prove that the fertiliser was worth doing: if you put on $10 worth of fertiliser, you got $30 worth of pasture. He said he was quite staggered that they'd do experiments this way, but he said that's the way that they did them because they wanted to prove they were right so when they gave the advice, 'Yes, put on a ton of nitrate, you'll be right. Here's the plots to prove it'. They would have their little field days in which they would show the plots. Of course, the very green and high-standing ones had the fertiliser and the pale yellow ones didn't but they didn't say that this was a bad soil and this was a good soil. I don't know how widespread that was because as I said I didn't get out a lot.

That wasn't particularly South Australia though was it?

Probably not, I don't know. When I was in the confines of Sydney University, of course, I didn't get out on tour much except to a few dairy factories. Then when I was in Werribee, the only time I ever got down the bush was when we were doing some cheese work at factories and I might go and help the people out to ensure that they were doing that correctly. But I didn't get on to farms very much, except I started to … When I was on the mastitis committee I made sure I made contact with the field vets who were involved in the mastitis work and went out a couple of times with them to have a look at some farms and see how well they were applying our standard practices to controlling mastitis. But not a lot, no. I suppose because I was a trained microbiologist and it was on the technological side, you tended to get isolated. People didn't see you as being relevant on the farm either. I could have helped just from basic logic rather than specific information, helping people perhaps design experiments that they were doing in farm situations.

The Department got a lot better at designing proper experiments because they had a lot of better trained people, a lot of people with PhDs and things like that. They are disciplined, of course, to do it the correct way and they would do it the correct way if they were allowed to. As I said, that funny fellow down at Struan, the butcher, he had a peculiar idea of how research should be done. What I found disappointing in the Department was the lack of pressure by the hierarchy to get scientists to publish their research. The scientists often thought that when they did their research and they gave some of their results to the extension people out in the field, that was as far as they had to go. I didn't believe that was right. A scientist should have been encouraged for his own development and his own ego, to stand the test of critical refereeing and publication of his scientific work because that would tell him from an independent authority that he met the standard and his work was accepted by referees as being suitable for publication. I rigorously pursued that policy with the dairy group. It wasn't a hard policy. They were quite happy … The discipline was something they had to learn but once they learnt the discipline of doing it, then we published. As I said, at one stage I'm sure we were publishing well over half the publications in the whole Department.

[26:40] There was a range of publications, a range of journals for [scientific] stuff. Some of the other areas, perhaps it was only the *Journal of Agriculture* anyway?

Some of the production research would appear in all sorts of journals, yes.

Other areas of the Department might have only had the *Journal of Agriculture* as their outlet?

No, that's not true. All the basic disciplines of agriculture had scientific journals. The *Journal of Dairy Research*, which was an international journal published in England, or the *Journal of Dairy Science*, which was an international journal published in America, and I published in both of those, had its equivalents in probably the *Journal of Pasture Research* or the *Journal of Animal Husbandry Research*. From the International Research Foundation and university and grant colleges in America and the research institutes like Reading and all those places in England and the ones in Europe, there would have been appropriate journals to publish. It wasn't some peculiarity of dairy science that you had the journals. Every scientific discipline would have its scientific journals. I can't tell you what they were because I wasn't interested, but I'm sure they're there.

But having people like Callaghan and Strickland and Marshall Irving …

They were not scientifically inclined.

But someone like Callaghan? I mean …

I didn't know Callaghan well. I met him much later when he was a retired gentleman. He went from the Department to Roseworthy to somewhere else. But I noticed that Strickland and Marshall didn't see scientific research as being that important in the Department of Agriculture. The scientists had to battle on their own. I was lucky in Graham Itzerott thought it was very

important and he was up the rank a bit further. Tom Miller also saw research as being important to horticulture. Tom was like Graham in that he thought he should go to every international scientific conference too and away he'd go. But that's just a quirk. In general, there wasn't any … I had to battle to get the funds ... With all the Commonwealth Extension Services Grant money, and there was a lot of that, I had to do that through Marshall because he was the go-between for the Commonwealth on that. I had to battle hard to get money. They had a cadet system and I was able to argue that we should get a … As we were publishing a higher standard of research, we should get our fair share of these young cadets that'd come in. We'd get the money from Commonwealth Extension Grants, from the Dairy Board and so on. They would supply funding for equipment, funding for animals and funding for technical assistance. I avoided, as much as I could, funding scientists out of that. Occasionally I would have no option and I would get the money to fund the scientists because, of course, you could only employ them for 3 years, that was the term of the project. I did work the Public Service system pretty well and I had the Department on side a bit. I was able to persuade the Public Service Board to appoint at least three or four of these fellows as permanent officers. (laughs) They woke up after a while and wouldn't do it anymore, but I got a few of them through so they were on the payroll and so the money could be used on a project basis to employ technical staff. They would usually go from one project to another, but they accepted that that was their permanency – the length of the project. If they worked well, I'd always say, 'Now we'll get another project which will go for another 3 years and you can be guaranteed that you'll be employed, if you do your job properly'. Mostly they did: most of the technical staff stayed on for years and years and years.

The longer they were there, the more likely they were to be permanent?

Very few of them got permanent status, which was appointed by the Public Service Board as an officer, which means you're there for life unless you do something terrible (in those days that was). Most of the scientific staff in the Department got on to permanent status one way or another because they may be firstly employed under a grant and then they would be recommended to be appointed and we kept the money from the grant to supply all the infrastructure for that fellow to do his research. Often research [funding organizations] would refuse to fund a scientist. They'd say you better show us you've got the basic structure to do it, which means you've got the scientist there, and we will give you the funds to enable you to do that experiment, which included technical staff and so on. We would use that argument with the Public Service Board to say that our scientists ought to be permanent. Under Don Dunstan – he was a good premier – he expanded the Public Service in that way. Maybe he thought it was a good thing. We enabled ourselves to get a reasonable permanent staff and structure. But as I always said to the troops, 'You've got to prove it. You've got to keep on publishing that work

and prove that you're not wasting your time'. Of course, I found it extremely valuable. I could go along to a funding organisation and say, 'Just have a look at that. That's what we've done in this last 3 years. That's just been …'.

[33:50] **End of Side B, Tape 2**
Tape 3, Side A – Session of 16 March 2004

[0:30] John last time we finished at the stage when you were moving into the marketing phase of your career so to speak. We talked about the dairy doings and margarine quotas and so on. Perhaps if we can just pick up on some other aspects of the work you did in the marketing area, your career there?

Right. One of the most interesting things that happened in Australia was that we suddenly found that our belief that dairy farmers were not dairy farmers but marketers was wrong. In fact, they really were dairy farmers and the only thing they really knew was how to produce milk. In a series of good seasons they produced too much, particularly in Victoria, and that stirred the Victorians no end that they were very efficient and therefore they should be able to sell market milk into other States. The Australian Dairy Produce Board believed that we had to do something about the [quantity] of milk. The Ministers of Agriculture met to determine whether we could introduce a quota system for the amount of milk each State could produce. Of course, in typical fashion, no Minister would agree to accept a cut in his State but was very happy to see cuts in other States. The argument went on interminably and *Le Bon Dieu* (the good God) fixed it all up. We had a drought. The production of milk dropped dramatically around the countryside and quotas were forgotten about and they never ever raised their ugly head again. They would not have served any purpose; they would have sent a lot of farmers broke that's about all. I continued to advise my Minister that he should be very weary of quotas because I didn't think that they would have the appropriate effect because our farmers were, in fact, extremely efficient in a not so advantageous dairying environment, as against Victoria, that we should be encouraging them to continue to produce milk. That was an interesting argument that went on for about 12 months or more about dairy quotas.

Do you remember the Minister?

Now that's a bit of a problem.

Or about the time when this was?

This would have been in the [mid] '70s, so was it Tom Casey or Abbott?

Not Brian Chatterton?

No, it wasn't Brian Chatterton's time. No, Brian Chatterton had [not come on] the scene by that stage.

Was it Ted Chapman?

No, it happened while it was a Labor administration I know that. Ted would have been fiercely parochial in his support of farmers in this State. He was a great friend of the farmer, Ted, didn't

like shearers. (laughs) He didn't like them at all! He wasn't too happy about me being president of the Public Service Association at the time either! (laughs) He got a bit upset one day. I went in to see him and he said to me, 'I can't see you for long John. I've got to see the bloody President of the PSA.' I said, 'That's me. I'm here to see you.' He was pretty upset about that. Couldn't understand why his … I was Chief Dairy Officer or Chief of Animal Husbandry or something like that? I can't remember the time.

We might be able to fill in the dates.

The dates you'll have to chase up. It's very hard for a fellow my age to go back … I'm going back 20 years or more and [the dates] all get a bit fuzzy.

[5:20] You'll get a chance to work it out later. So that was the issue of the milk quotas.

Yes. The lifting of table margarine quotas, which was initiated in this State (I'm pretty sure it was Tom Casey), was probably a very good thing over all. It certainly was good for the consumer that they then had a choice of what they wanted in a spread. They also revitalised the dairy industry to push on with the dairy blend phenomena, whereby they could still argue the butter fat content of their product and that it could spread easily, because we had proven in survey after survey that spreadability was the most important thing for a housewife, who was very often a working housewife, had to cut sandwiches in a hurry and she didn't want to have to put butter out to thaw out so she went to margarine. When the dairy blend came, many of them were persuaded to come back to the butter-based product. The dairy industry would have suffered the same problem that it did in Europe where huge amounts of butter were stored up because people preferred to buy the vegetable oil-based spreads. Our research to develop the dairy blend really did a lot to help the dairy industry sell butter fat, which they would not have otherwise sold.

[7:55] You were saying before we started today John that you were interested in the challenge of moving to a different area after a certain time in research and looking for other projects. In this case you were moving out of research all together and into marketing.

Into the politics and the administration of agriculture because as I slowly went up the tree a bit, in between my union and other activities, I broadened my scope out of dairying into the whole of the animal industry world. I found looking after the politics of those industries in relation to government policies and freeing up the experts within my control to do their expertise and not interfere with that ... Some (and I will not mention names) ex-technicians like myself who rose up in the ranks couldn't let go of their technical side and often wanted to do things in a technical sense rather then use their experts to give them advice, translate it into political language and then present it to the Minister of the day or to some national meeting that you had to go to so that they were aware, the Ministers were aware and other States were aware, of the technical structure of the industry and how that impinged upon the policy of the government of

the day as to what they wanted to see implemented because sometimes they would be in conflict – a government would want a policy which really couldn't apply to its particular industry. For example, both Labor and Liberal governments, and this is probably national let alone just South Australia, believed that all these marketing bodies should be got rid of, we should go into a free-market economy in the production of agricultural products. There was just one tiny flaw in all that. Farmers aren't marketers except in the odd situation and they only know how to produce the product they grow at the least possible cost. They know from experience that the more product they produce the more likely they will be able to pay their bills. The only way you can manage those industries, particularly the ones that can be explosive like milk or eggs, cereal production, grapes and all those things, is to have a marketing board with expertise on it to provide the necessary information both to the farmer and to the government that will enable the industry to exist. There were several ways that this could be done – by pricing mechanisms in legislation, by production control in legislation. The egg industry, for example, needed the whole lot: it needed production control, it needed pricing control and it needed monopoly selling by an authority because … I warned several Ministers when I was Chairman of the Egg Board that if you deregulate the industry, there's only one winner and that's the supermarkets. I said, 'They'll go from having about a 6–8% margin on the sale of eggs to probably 30 or 40 or 50 or 60 or 70% whatever, because there will be a monopoly. They'll determine what they pay the farmer and they'll determine what the consumer will pay for the eggs and don't think they'll be altruistic about it or there will be competition because I can assure you there won't be'. My prediction was absolutely true. They [deregulated] all these industries and guess who lost out? The farmers lost out and the consumers lost out. The ones in the middle, they did all right.

Now, if you can train a farmer to be a marketer, of course you step out of the industry. He can make decisions. They are often good marketers. Take the flower industry: the people that grow flowers are very aware of the market. For one reason or another, the pig industry always has. If it wasn't for that frozen Canadian pig meat, they would be a lot better off than they are now. There are a lot of agricultural industries that have made the jump into being market conscious and market orientated in what they produce. Individuals within an industry have done it. They can see, I'll get out of wheat and get into canola because I can make more money out of it. Most farmers have grown wheat, grown wheat, grown wheat, grown barley, grown barley, grown barley, milked cows, milked cows – they don't really know anything else. [What I'm saying, therefore, is heresy of course, but] the free market economy is a myth.

[15:05] That move to a free market economy that you're describing, was that something post your time in the Department? Do you see it as a more recent …?

No, it was happening at the very end of my time. The marketing boards were all still there. They didn't deregulate until after I'd retired out of the system. I never opposed – and I'll make this very clear, and are you listening?, make it very clear – I never opposed government policy of the day whether it was Liberal or Labor. What I did was advise them of the consequences. If they wanted it implemented I would implement because that's the Westminster system of government. They're the boss. They bear the brunt of the consequences at the ballot box if they upset the community. We're there to implement the policies and tell them what the risks are and what the outcomes will be. I can remember a really good one. Ted Chapman when he was a Minister, because he came from Kangaroo Island he was very keen to see a export abattoirs built on Kangaroo Island to process a few pigs and a few sheep. Our advice was it's not economic to do it: let them have their own slaughterhouse to process their own meat for sale on Kangaroo Island for whatever it is, 20 000? people, that live there. To come up to export standards you're talking millions and they couldn't do it. He went ahead and sure enough in about 3 or 4 years after they started they went broke. A lot of government money went into it and it never got to [survive]. So yes, you advise them but if they say 'Go', [we] go. We then put all the information in that allowed them to build it, but we'd already told the Minister that we didn't think it was viable anyway.

[17:35] You were comfortable with that notion of separation of your personal and even professional views with the role of the government?

Yes, you had to be. This may be because I was a thinker laterally rather than up or down, but I could clearly isolate each of my activities. If I was at a meeting as President of the PSA or ringing through the PSA and I was dealing with an industrial situation with the government, I wasn't a public servant. A lot of them thought I should be. They'd say, 'Why don't you …?'. I'd say, 'I'm representing my members. We're here because we've got a justified case for this or that'.

Some people in the Department couldn't sort out their personal relationships with their group of farmers – whether they be sheep farmers, wheat farmers or whatever they were – and their role to advise the government of the day on government policy or on some requests by farmers to the government about something. Their job was to say, 'This is what this request will mean. This is what it will cost if you do it. These are the consequences if you don't (or as we see it, the consequences). This is government policy'. They would often be confronted with a situation where their own policy was their worst enemy because how could they save face and say. 'We've changed our mind'. They could do it in a rollover election but it's very hard to do it in the middle of a term. Sounds a bit trite [but] I used to get a lot of enjoyment out of seeing the problems that these politicians had to face when a situation blew up. I'd say that some

Ministers were very good, very flexible and able to see the sense of actually changing their policy attitude. They'd come up with all sorts of excuses but they'd have the sense to see we've got to change this otherwise we mightn't get back next time.

[20:33] Obviously in terms of developing policies, a political party comes along with a policy, a platform is developed somehow. Did you personally, or the Department, get involved in any of that … seeking advice and …?

Yes. We would advise the government on options of policy about issues.

I was thinking also, John, before a party got elected to government, did you find ... the opposition?

No, the opposition were ...

It just seems that there's an opportunity there for a party, whether it be in government or opposition, to 'collaborate' with the Department of Agriculture and say 'Let's formulate some good policies'. Did that happen?

On one occasion there was a situation where the dairy industry was in real strife and the Minister of the day – I'm trying to think of who it was. Anyway, Ted Chapman was the Shadow Minister of Agriculture. The Minister of the day was going to talk to farmers about the possibility of quotas and so on, what it might mean. The Department suggested to the Minister that it would be a good thing to bring Ted Chapman along to the meeting. In fact, come with the Minister and talk to the Minister on the way down about what he was going to say. A well-informed Opposition Minister of Agriculture would be better than an ill-informed one who could make all sorts of silly statements. To the credit of that Minister, now it could have been Casey or Abbott I can't remember, he said, 'Yes, that's fine'. Now that was a case of where the Department made a direct suggestion to government about how they might pursue a policy. The Westminster theorists say that party policies are, in fact, basically influenced by bureaucrats. That depends a lot on an individual. It certainly happens very much so federally, because I had to deal with a lot of federal bureaucrats and they were like little tin gods. Certainly the British system gave it, because they were the founders of the Westminster system but I don't think that a lot of it went on in our Department. A Minister would seek advice on how to deal with a problem where there was no clear government policy and the Department would provide a series of … Well they should (you never give a Minister one option), they should, and I always did, gave them a series of options. You then said you believed that option was the best one and that one was the worst one. But the Minister knew what the options were and he had to make a political decision on what he would do. That probably could find its way to government policy because it might have involved a regulation or whatever. Of course, individual officers in the Department and I'll put my hand up, we had our political leanings and we belonged to political parties. As an individual, I made inputs into the ALP policy and that would have included agriculture because that was part of my expertise. I didn't see any conflict there, because I had a right in a democracy to do those things.

So it was a case of perhaps removing ...

Removing a hat, yes. This is John Feagan, citizen, member of the ALP, I want to put my views forward on a particular subject. The policy in the ALP, I can't talk too much about Liberal policy because I never belonged to the Liberal Party, I don't know how they work it, but policy in the ALP is in fact a complex thing. It started at the branch level and if you're a senior official of branches, which I was for many years from time to time, you get resolutions passed which go to the annual conferences where you then have to argue the so-called factions (who think they run everything, particularly in the Labor Party) to get your item up the list somewhere where it might be debated. That's our policy in the Labor Party. When a particular item gets up and it's voted on it will become part of policy and then it's written into the policy for whatever it is. So that's how the Labor Party does it.

So yes, as a agriculturally trained person, there could have been quite a few people in the Department of Agriculture who would have influenced party policy on agriculture. It wasn't the job of the Department to just put a farmer's point of view to the government. I had to retrain a lot of my Principal Officers, and they're fairly senior, like the Principal Officer of sheep who gave me all the technical advice on sheep and the Principal Officer on wool or the Principal Officer on pigs or whatever it was. I wanted them to give me all the options on a particular document that would come down, a query: the Minister wants to know how does he answer this letter or whatever it was. I said it's important that (1) you read the policy on that area so that you know what that is. There's no point in just putting up an option that's in direct opposition to policy without alternatives. You might put that up and explain that if they did that well that's what would happen and if they did that this is what would happen. The Minister then has to weigh up what he is going to do. He'll pick one of those. He might pick none of them. He might send it back and say, 'I want something else'. (laughs) That's his prerogative and you just talk to your specialists and say what other alternatives are there besides shooting yourself!

[29:08] I'm presuming you can get advice from a range of people. You could go to the Stockowners or … Could you go to things like the Egg Board and ask their opinions?

Who?

The Minister?

Yes. When I was Chairman of the Egg Board I often would get queries from Ministers about things. Also, I encouraged my technical experts to range as far and as wide as they thought was necessary to get feedback. I always warned them, don't publicly make any comment about a government or a Minister because that will come back to haunt you. But it's quite right for you to ring up the Farmers Federation to get information from them, but just be careful how you do it. Make sure that you're an objective bureaucrat seeking information so that you're better

informed. Some of the Principal Officers were good at it, some of them weren't so good at it. Some of them thought as themselves as the farmer's friend full stop. Therefore anything that came down from the Minister's Office which was likely to in their view put some sort of disadvantage on the farmer, they tended to oppose it strongly in their briefs. I often used to send the briefs straight back and say 'It's a waste of time. That's not what the Minister asked you. You answer what the Minister asked you'. It might be, 'How do I implement this policy? What is the best way I can implement it?'. Not, 'You shouldn't' because the Minister made the decision, that's it.

Were there any cases that come to mind where you personally or your officers had a significant victory in convincing the Minister to take a different track?

Let me think.

Perhaps you can have a …

I'd have to think about that. I don't want to say something come to mind that was only in my mind.

Perhaps you can add something when the transcript comes through.

Yes, I might be able to think ...

That's just a memory jogger I'll put on tape here.

I'll think about it, but I'm sure we influenced Ministerial decisions. Now, on issues that were of great importance we briefed our DG [Director-General]. It was his decision whether he'd take us along or not. I never made any point of view on that. The DG had to make a decision on that. If he thought I better have Feagan along or French along or whatever then he did. But on big issues it was very important that the head of your department carried a brief so that the Minister was well aware of what he was dealing with: 'This is what the Department thinks about this matter'. On matters that weren't of tremendous importance, it was better for the Minister to see me or whoever. I might even send the Principal Officer to the Minister because it was a purely technical briefing. That fellow would be much better, and better if I'm not there to interfere, because old technical people interfere terribly with outdated ideas. That was a matter of judgment, but I used to have some chiefs who answered to me who wanted to always go and brief the Minister because they thought (a) it was their prerogative and (b) only they could do it.

[33.45] **End of Side A, Tape 3**
Tape 3, Side B

[0:05] It was my responsibility to make a decision, whether or not my technical expert should advise the Minister, whether I should advise the Minister or whether we should advise the DG to talk to the Minister because of the nature of a particular problem, the sensitivity of it. Often a technical expert wouldn't be aware or wouldn't see the significance of the sensitivity of a

particular query that the Minister might have raised. It might have been important that when you advise the Minister that you allowed the Minister a big door to escape through at the end of the advice because he had to carry the brunt of whatever it was to be decided by sometimes himself, sometimes something had to go to Cabinet. It was important that the Minister had all the options that were available to him in respect to any matter. A good example was the advice to Ted Chapman about the Kangaroo Island abattoirs. That was taken right up to the DG to handle because I felt it was a very sensitive issue and there was a lot of money involved. The Chief Veterinary Officer at the time, because he was the chairman of the Animal Health … What was it? Animal and … I've forgotten the name of the committee. Anyway it dealt with standards for abattoirs and slaughterhouses and all that sort of thing. He thought he should, as chairman of that committee, advise the Minister. I said, 'No. The brief has come to the Department. If he'd wanted your committee to do it he would have sent the brief to them and then you would have as chairman done it'. Because when I was the Chairman of the Egg Board, the Minister would send a brief directly to the Egg Board. If he wanted the Department to give him some comment on egg marketing which he thought he didn't like what the Egg Board was doing, he would get the Department to give him some independent advice. That was his right and prerogative. So, yes, those sorts of issues … The role of a senior bureaucrat in any department is to make sure that the level at which advice is given was the correct level. When you're not certain you go and have a talk to the DG about it and say, 'This is what I think. What do you reckon?'. If he's busy then obviously you can't do it. If he's not busy, then he'd say, 'I'll go through the Act myself. I'll go and do it'. It was a bit of give and take.

[3:50] McColl, who I served under most of my senior life, he wasn't a bad boss at all. He always wanted to be informed. You always gave him the opportunity of knowing what was happening. Technically he was supposed to sight all briefs that went to him when they were just briefs, a docket. Whether he did or not I have no idea. Used to think it would be too much for him. John Radcliffe would have. He sighted everything, but I don't think Jim did. He respected the ability of his senior staff.

He gave you the your head to …?

To do things.

… do things whereas John was a bit more of an interventionist?

John had very high standards. He was a bit judgmental about people's abilities to meet those standards. If he made a decision that they couldn't he would always make sure that the things passed through him. They would tell me that at times when he took his suitcases home he could hardly carry them they were so heavy, full of dockets. I don't think Jim McColl would have taken a lot of dockets home. A different style of management.

You got to see both styles.

Yes. I worked under John for 2 or 3 years before I retired. I got on very well with him and he used to seek my advice so he must have respected me. I hope so. I don't know, but I hope he did.

He'd sort of worked under you?

He'd worked under me and I used to have to sit on him occasionally. He was a very strong willed fellow I tell you, very strong willed. But I enjoyed sitting on him occasionally.

Perhaps we should just have a look at the two DGs or Directors as they were. Firstly, McColl coming to the Department. What do you remember about that?

Very interesting because the Department was part of a Public Service system which was a bit hide-bound, had this seniority promotional phenomena and not ability phenomena. The Public Service Board had decided to pick out a fellow called Peter Trumble. I don't know if you're going to interview him, but they'd decided that Peter Trumble should be the Director-General. At the time, Brian Chatterton was the Minister and Peter Trumble's name was put forward by the Public Service Board because that was the system and how it worked and Brian Chatterton said 'No, I don't want him'. There was a fair bit of an impasse for I don't know how long, it might have been 12 months while this was all hanging. Irving had retired and Peter Trumble had been acting. Then there was a re-advertising, I'm not sure, but anyway McColl was then put forward by the Minister to the Board for their assessment. I'm not sure what happened in detail but anyway eventually Jim McColl, who I'd known way back in Victoria as a young fellow, he was running his own advisory service. A lot of it was dairy so we had something in common. He was just appointed, just like that.

So more or less a Ministerial appointment, Ministerial selection?

A Ministerial selection I believe, yes. But, of course, it still had to be done under the *Public Service Act* protocol, which was that the Public Service Board technically had to put forward the name and the Minister had to say, 'Yes I'll recommend to Cabinet' and that was it. I presume that they sorted that out somehow or another but it was a selection by the Minister I'm sure.

[9:25] My experience with Jim was that … I remember he came down and said, 'You're about the only fellow I know here John'. I said 'Well, you'll have to get to know most of them Jim'. I got on quite well with him. We used to have our disagreements. He was extremely strong on the concept of regionalisation, which was a government policy. I'm not sure who influenced who there. Perhaps Jim McColl influenced the government on it. I don't know. It became a strong policy of the government to regionalise not just agriculture but all sorts of operational activities of the government. I was seen as a nigger in the woodpile but all I was saying was,

'Let me point out the consequences of regionalisation and what you've got to think about carefully in terms of effective operation and efficient operation'. I was quite concerned about two matters. One was the integration of research across the State in each discipline and the integration of extension across the State. Now that meant that if you were going to build regionalisation up where the Chief Regional Officer was a tin God in his own area, you had to put some restraints on it. Of course, I had long arguments with Jim about this. That the research policy on animal industry (because at that time I was Chief of Animal Industry at that stage when it came in) that the Principal Animal Research Officer should, in fact, lay down the principles of research procedures and State priorities and the regions would be responsible for determining their own priorities within that and the programs of research, but the programs had to meet a protocol set down for the whole State. They had to make sure that the scientific principles always applied in research programs so that they came up with a result that you could have a meaningful answer to. And I said in extension the same thing had to happen where the extension standards of information and how they were to be presented were set at a State level and the regions determined the priorities of extension, which would happen. If they thought that there were bigger problems in sheep than cattle, then they'd put more effort into sheep than cattle. Had nothing to do with the central authority. That was I thought true regionalisation, not where the regions saw themselves as little mini Departments of Agriculture which most Chief Regional Officers saw themselves as.

You had to guard against that?

I believed we did otherwise you were going to set up a whole series of small bureaucracies to run all of this at a fairly high cost. Regionalisation did cost money because you had a lot more senior personnel than [just] all these chiefs. There was a confusion between regionalisation and decentralisation. From the time I became Chief Dairy Officer I immediately set about decentralising operational control. When I inherited the Dairy Branch, Graham Itzerott had … If you wanted to come to Adelaide, you had to get his approval. Somebody rang me up, when I was first appointed, from Mount Gambier and said, 'I need to come to Adelaide blah, blah, blah. Would you please approve it?'. I said, 'Wouldn't have a clue! Don't ask me that'. Forget his name – Bowen, can't think of his first name. I said, 'You're the Senior Dairy Advisor down there. You make up your mind. If it's important enough you'll spend the money which means you haven't got … Because you're on a budget you will have less money for something else'. He said, 'Oh, oh'. I said 'Just let me know you're coming so I can say hello, that's all'. (laughs) This was part of the problem that the Department was terribly centralised, so regionalisation was the way out of that, they thought, but I would have thought they probably could have done just as well by decentralising and having local authority with more power to make priority

decisions. I didn't win that, of course. I lost that out and I was always seen as an opposer of regionalisation. I wasn't opposing it at all. I just said that you've got to make sure it's effective.

Here you're talking about when McColl turned up and [implemented] regionalisation. Had you had any input to the Callaghan Report which developed [the concept]? Callaghan being a former Director of the Department.

I had an interview with him and I would have put my views clearly. I can't remember what I said, it was so long ago. There were lots of good things in the regionalisation concept, there still are, but there tends to always be reaction and overreaction. A good example was health and aligned services. The Liberal Government saw it as separate departments that had been set up by the Labor organisation (this is when Dean Brown came in), so they created this super Health Department which covered everything. Of course, bureaucrats love to create positions for themselves. They're great at it. So they created a whole lot of executive officer positions, scattered them all around the place. I'll tell you something when we get to the review of the Public Service how I got into real arguments with them. Now they've just decided they've got to split it up, they have decided it's going to be split in two. The Callaghan Report saw all the inefficiencies of a highly centralised operation. It is inefficient that every time you want to get a pen you've got to get approval from Head Office. When I first joined the Public Service in South Australia, about the only thing you could buy was a biro. If you wanted a typewriter you had to get the Public Service Board to approve it. I was absolutely staggered.

They'd progressed to the stage where you didn't have to put in a req. [requisition] to get a biro!

Didn't they! (laughs)

That was flabbergasting.

Store branches in departments were little tin Gods.

[19:00] That regionalisation, in a sense you had a feeling for it because you were based at Northfield and Head Office was in … 10 ks down the road.

Of course. I could see the value of the local experts identifying far more effectively what were the problems and the priorities of those problems in an area. Once they'd identified those – say it was parasitology in sheep in the South East (because it was a big problem), once they had recognised them then it was my advice that they should then start to consult centrally with the experts. There might have been in my division of IMVS the Principal Pathologist who studied parasites in sheep so that the experiments that were necessary could be most effectively designed and thought through to get the end result. It had to be a cooperative thing because you couldn't afford to put Principal Parasitologists in every region, the cost would be big. You needed one for the whole of the Department and he should be where he was in the IMVS as a Veterinary Parasitologist. What I didn't want to see was them going off on their own and doing it. I never blamed the individual scientist or Extension Officer: they're in the environment and

they just want to get ahead and they think, 'I can do this and do that'. It was really up to the policies of the Chief Regional Officer to ensure that, in fact, he got the best input to ensure that that Extension Officer or Research Officer was going to get the best information possible to design and carry out his experiment or to get the best information to go out and extend the information to the farmer about the problem.

It differed from region to region how effective that was because it depended upon the Chief Regional Officer of the time. I remember my Chief Veterinary Officer, John Holmden having great difficulty with the South East in respect to the setting down of quarantine standards, disease control standards, the notifiable diseases, particularly exotic ones. It had to be a central plan. In fact, some of them had to be a national plan like keeping foot and mouth out and things like that. It was important that … For example, John Holmden was [an] autocrat ...

That's the Chief …

Chief Veterinary Officer.

John …?

Holmden. He's up in Fiji if you want to interview him. I'm a personal friend of John's but he was a very determined vet. Didn't believe that non-vets knew anything about veterinary science. It upset all of the vets that I was in charge of them all, I can tell you it really upset them. He was correct in the sense that he should have been able to say to the Chief Regional Officer in the South East, 'Now look, this is your vulnerability to these exotic diseases and therefore this is the minimal input you need to have in terms of tracking the sale of cattle and all sorts of things'. It was correct that John should have said what was the priority and not Nigel Thompson who was the Chief Regional Officer. They fought like cats and dogs and I used to have to go down and take a bucket of water and pour it all over Thommo. 'Come and have a game of golf', I'd say (because he was a great golfer). Then I'd beat him at golf and I'd whack him around the golf course telling him don't be such a bloody fool. Eventually I could get him to agree. Because John was an autocrat, he'd say, 'I'm the Chief Veterinary Officer, blah, blah, blah'. He had no diplomatic skills.

[24:35] Not only that, you get in your own patch and you tend to lose sight of that bigger picture. Regionalisation is something that is, in theory, for the betterment of the Department and for the betterment of the industry. Whether that's the case in practice … How did people embrace regionalisation?

The Department as a whole embraced it. They saw the point of what Callaghan was saying and it was purely a matter of how you put it in place. In the end I won in that I remember Stuart Pell, my Principal Research Officer in charge of [animal research], ... We had our own research stations within the division – the one at Northfield, the one at Parafield – but there were sheep and beef cattle research stations scattered in the regions, different regions. I won in the end in

that they did consult Stuart. Stuart was a bit … He said, 'I've got no power'. I said, 'That's right. You've got to use your skills of persuasion because if I was lucky enough to persuade the Department to give you the power it wouldn't necessarily work because as soon as you go away they'll ignore you. You have to persuade them that you have beneficial information for them and that you've got the backing of the Department, not just me in the Department, to provide that information. And that the Chief Regional Officer is aware that you need to be consulted'. After a while Stuart loved his pastoral visits because it got him out of the city. He came down to the bush and did what he liked. He would spend a week down at the South East talking to the people there about their research programs. He'd have a look at their research designs and he'd point out the mistakes and things like that. He did it very well.

I have no idea how well it happened in the plant area. The plant area was never a happy area. The first Director of Plant Industry they appointed was Arthur Tideman. A lovely fellow Arthur. [break in recording]

[27:45] After that short break John, perhaps one question I'd like to ask you there, in terms of regionalisation, was there any generational attitude in that older members or longer serving members of the Department saw it differently to the younger breed coming through?

No. Some of the Head Office Principal Officers saw it as a threat to their authority because before regionalisation they sort of owned the whole State. I never saw it as a threat. To me it was government policy. It had to be implemented. Our job was to try and get it into place in the best and most efficient way. The difference is how you operate, not that it shouldn't operate. Some of the Principal Officers saw it as a bit of a threat to their authority but the Department as a whole accepted it pretty well.

[29:00] The other big issue at that time of McColl introducing the regionalisation plan had been the Monarto episode and the possible move there.

Yes. I was on the Monarto Committee. I was appointed by the Premier of the day, Don Dunstan, to represent all public servants who were going to be shifted to Monarto. The concept was OK. My personal view was yes. The Whitlam concept of decentralising government operations into the bush had a lot of value, as long as they looked at the efficiencies that were required to do it, but it would stimulate country sense to have the government department's central offices in their areas. My main role was to ensure that the public servants who were relocated – and the ones who were to be relocated were a matter of what policy the government laid down as to what departments they would like to see there and what parts of departments they would like to see there, so we knew what numbers were involved and so on, so it was my job to ensure, as I saw it, that the relocation of individual public servants was done in an effective and humane way, taking into account the social structure of individual public servants and their families. The people that I had to deal with, Iris Stevens and what was his name, a

fellow from private enterprise, I can't think of him for the moment, he did a lot of contract work for the government, he had structural arrangements. You might look up his name whatever it was. There were the three of us.

Were you there as an Ag. Department rep.?

No, I was there representing the whole Public Service ...

Under the PSA hat?

Sort of PSA hat, yes. I didn't have my PSA hat *per se* on, but I was there just as a member of the committee. I wasn't appointed PSA rep *per se*. I was appointed because I was a senior PSA official, there's no doubt about that, because Dunstan wanted to make sure that the arrangements for public servants who were to move would be done effectively and properly. Now I had a lot of difficulty with the other two members of the committee and the conditions under which public servants should be relocated. I had done extensive interviews with Public Service groups. I'd called meetings using the PSA structure to get those meetings called so I could talk to members of departments to find out what they saw were the problems and what they saw as the plusses of moving. I had people who adamantly didn't want to move. I had people who were keen as mustard to move. I had people who would accept to move under certain conditions. So I had to sort all of that out and ...

[33.42] **End of Side B, Tape 3**
Tape 4, Side A

John we were just talking about Monarto and your role on the committee.

Yes. I was asked to be part of a committee, as a person on the committee, but I saw one of my major roles was to ensure that the individual public servants who were to be relocated were … it was done so with feeling and with some sensitivity. In the end, I could not persuade my two colleagues to go my way with respect to a whole series of important issues. One was the timing of relocation relating to the family problems like kids in their senior high school year, family at university and so on. They didn't want to take that as any consideration in the relocation but I was very adamant that a family should not be relocated if it had senior high school children until the end of the high school year, after they had done their exams. The same for the university people. They shouldn't be relocated in the middle of a university term but at the end of the year. I also argued that if a family member was doing a university course and their family was relocated that the government should provide either transport to and from the university or provide some financial assistance to allow them to stay in the city and go to university. There should be relocation costs. You don't shift, sell your house and go to Monarto for nothing. There should be compensation. We argued about that level of compensation. In the end, because I believed we couldn't agree, I wrote a minority report with respect to those things, not a total report on the whole thing because there were lots of things I agreed with. I remember Iris

was very upset. She said, 'You can't do that'. I said, 'Yes I can'. She was Chairman of the committee Iris – a funny lady. (laughs) A fish out of water in the Public Service Board I tell you! But it was what I called tokenism for females being up in the hierarchy of the Public Service. I put my minority report in and lo and behold it was accepted by the government on those aspects and I got my way. Iris wouldn't speak to me for months after that, wouldn't speak to me for months, but what I had to say was reasonable and logical and I argued it. Anyway, the Cabinet, whoever it was, accepted it which I suppose was a bit of feather in my cap, I don't know. Then, of course, Whitlam lost office and so Monarto went down the gurgler.

Were you doing this work on the committee in departmental time? Had you been seconded from the Department ot the …?

Yes. But basically you can call it departmental time but all it meant was that I worked a longer working week. I was still full-time Chief Dairy Officer. I can't remember. I still worked full time but I mean because the committee met in the daytime, it meant I used to have to work back at nights and come in on a Saturday morning.

You were doing your full-time duties plus this?

That happened when I did the review of the Public Service. That work meant the daytime too.

We will come on to that in a moment.

A mob called Pak Poys was employed to do the architectural structure of what the new Monarto would be. I did a few things like I persuaded the committee to recommend that they build a golf course. What else? A community centre of some sort, because I said a lot of those people would want to live their permanently but a lot more want to live there from Monday to Friday and come back to the houses in their city. They might go down there and leave their families at home. I said in that sense that's probably the cheapest option because you can provide living quarters for these people. For the people who want to live there permanently you've got to give them something like a golf course or an amenities centre to fill in their weekend. That was agreed. That's what you'd call the Monarto Relocation Committee.

Were you working on Monarto within the Department itself? You know getting plans for a possible move there?

They really did it within the Department. I'm trying to think because some of these things get fused or fuzzy.

You can sort it out later.

You might have to check through somebody else like McColl or someone, but I'm sure I would have had something to do with it because I remember the concept was the whole Department was to go but they were going to leave a small structure in town which would be the people who were normally having direct access to the Minister, like the DG and some of the top brass.

Would you have gone to Monarto yourself, if it had gone ahead?

Probably I would have at the level I was at that time I was Chief Dairy Officer. I was involved in getting a research centre to be transferred from Northfield to Monarto and we'd actually designed all that and what to do there to build a dairy research centre there. The whole of the Dairy Branch would have gone there. I'm not absolutely certain because it didn't quite get to the stage when the whole thing fell apart.

I talked to some people who sort of suggested that yes, they would go and other people in the Department would have left the Public Service or looked for another department.

Some of them would have, but I always took the attitude when you accept a job in the Public Service, particularly a senior job, you are a public servant and your loyalty is to the government of the day, you've got to provide [for their needs]. When they say go to Whoop Whoop, you go to Whoop-Whoop. The reason that you may want to not go is that you believe that your family commitments don't allow you to go, whatever they are, and that's fine. But then you make that decision and you resign. That's the prerogative of an individual. But I don't think you had the right to say, 'I want to stay at that department, but I won't go to Monarto'. I'm not quite sure at what the level they would have been back in town. I don't think it got to that point but I would have gone personally. I had talked it over with the family and I was going to be one of those people who left my family at home because of the complication of the ages and the education and everything else. I would have been a commuter. I would have gone down on Monday morning and come home on Friday night probably. I would have accepted that. My wife hadn't decided. I might have ended up being with a family down there but it all fell apart before then.

[10:30] It remains one of those 'what if' situations. It's a fairly dynamic sort of time when you think you've got Monarto proposals, you've got regionalisation, you've got Marshall Irving being crook and Jim McColl coming in, you've got Brian Chatterton as Minister. I gather he was pretty hands-on as a Minister.

Particularly his wife was hands-on, Lynne Arnold. She was very hands on.

Did you deal with them?

I dealt with Lynne Arnold in no uncertain terms. She saw me as the beté noir or enemy number one because I spoke directly to the Minister and said I would not tolerate her interference with my officers. I told her I was going to tell the Minister. This was before she married him. I said that I felt that if, as the Ministerial Assistant, she wanted jobs done then the protocol was that she put her submission to the Minister who then send off a brief to the Department and we would do them. But she had the habit of just ringing up one of my officers and saying I want this done straight away. They, of course, already had a workload, often Ministerial work loads and that confused them. I found that quite intolerable and I told the Minister that. Yes, Brian was a hands-on Minister for agriculture. Of course, he had an Agriculture Economics degree or something like that.

It seems more like he was trying to be the Director of the Department rather than the Minister of the Department, the [way] he was involved.

He did, and Lynne Arnold certainly saw his role that way. She used to go with him to most of his meetings. I can remember going to some Agricultural Council meetings and she would just interrupt somebody and say something and there would be deadly silence. I mean the Ministers talk to the Ministers and only with permission does an officer talk to the Ministers. I mean a Minister might say, 'I would like my officer to tell you about this' and then you'd get up and you would say your piece. But you didn't jump up and argue with a Minister. Ministers can argue with Ministers.

It must have made for a lively meeting or two!

It did. There were some lively Ag. Council meetings I can tell you. That was an interesting period. When the government changed for 3 years, we had Tonkin in for 3 years and then Bannon became the Premier and Chatterton was reinstituted as the Minister. There was an onslaught on McColl to get rid of him by Lynne Arnold and the Minister. The argument as I understood it was ...

For the record, Lynne Arnold was by then Lynne Chatterton?

Lynne Chatterton, yes. She would have been Lynne Chatterton by then. Jim McColl came to see me about that because of my PSA background. I said, 'The Minister can't get rid of you. The *Public Service Act* only allows him to recommend to the Chairman of the Public Service Board that you be investigated as being whatever, incompetent, and then he will independently investigate it and then send a report back to Chatterton who may then put a proposition to the Cabinet. That's the way it goes. There's got to be some reason, not just that he doesn't like you, alright? I can't understand because he appointed you'. He said, he told me he thought it was because having worked for the Liberals he couldn't trust him any longer. I said, 'Gosh. Westminster system mate. We all work for governments, whatever their colour and their creed'. That was a very difficult time.

The episode there of the fall out between Chatterton and McColl the second time around ...

Yes. It was unfortunate that they couldn't work together. Then after Chatterton we had …

[16:00] Frank Blevins.

Frank Blevins. It was during the time that we had Frank Blevins that there was a dust up in the Public Service Association when the staff tried to take over control of the organisation. The then president of the PSA, a fellow called Jim Otte who died of a heart attack unfortunately …

Wife (Heather): Did you say he died – Jim?

Yes, dear.

Heather: Hmmph.

He requested that the … Wait a second I'm out of date. This happened … Yes, I'm out of sequence with that. That happened when Chatterton was the Minister. So it happened in between the two, I was seconded for a year to be the General Secretary of the PSA. We might have talked about that.

Would that have been Ted Chapman?

It was Chapman there, that's right. But Tonkin had agreed to it, so Chapman had to agree to it. McColl wasn't too happy. But when I came back the government had changed, by the time I'd come back. That was when I got the job as Director of Animal Services, which was a bit of a surprise to me but I got it. I was asked to apply for it, I applied for it and I got it. So I was seconded to the PSA for a year to sort out those cranky employees. There was an interesting little episode while that happened. We called a general meeting of members for a vote of confidence in the Council, all of the Council and to support what they were doing in relation to the strike by the staff. There was a young fellow there, he was a Senior Advisor to Bannon, who was at the time married to a lady called Jenny Russell who was an industrial officer with the PSA. He was a member of the PSA, but he went to this meeting and got up publicly and supported the staff, which I thought was quite disloyal of a member to do. He should be supporting the membership not the employees, even though he might have been married to an employee. Do you know who that was?

No.

Our present Premier [Mike Rann]. It's on record. I mean he did it. He was running around and I got the microphone and I said, 'Would the member please sit down?'. I spoke to Bannon about it later. I said, 'It was not very good behaviour because he was a known person'. It meant that it linked the Premier with supporting the staff and not the union. The Labor Premier could never do that. It was against basic principals.

The machinations.

The machinations of it all. Anyway, that was another episode in my life.

[20:10] Perhaps it's an appropriate time to talk briefly about the Public Service review. You've mentioned that a couple of times.

Right. The Public Service review, that happened when I was President of the PSA. I was nominated by Bannon to … When did that review take place? '85?

Bannon came in in '82, went through to '85.

It must have been '82 or '83. It might have been because I was General Secretary, I can't remember. Whatever it was, I was nominated by … Maybe I was back in the Department I can't remember, but I was nominated to represent the employees on this committee. The

committee consisted of 'His Grey Eminence'. Cathy … His Grey Eminence was the Head of the Premier's Department.

Bruce Guerin.

Bruce Guerin. There was Cathy. She was Solicitor-General or something.

Branson?

Branson, that's it, you got it. Cathy Branson. The General Manager of Mitsubishi and myself. I remember the Chairman of the Public Service Board had his nose a bit out of joint because he wasn't appointed to it. The attitude was that he was a bit too close to the current situation. I had a fellow called Bill Cossey as my research assistant. A great fellow he was, a very bright boy. He's a senior public servant now somewhere. We reviewed the whole operation and we investigated departments and we separated ourselves out. I remember I had Highways and Education as part of my bailiwick and we went off to talk to these people. I discovered that half of the executive officers in the whole service were in the Education Department. God that was a bureaucratic nightmare that Education Department. About a third of them were in the Highways Department. That thing had about eight tiers of bloody management, responsibility. If you got a docket at the bottom, by the time it got to the top it would have been yellow with age and in tatters. We looked at organisations and made recommendations on how they could be flattened out. A lot of duplication could be reduced because what happened was a lot of these reviews took place within departments and they'd restructure but they'd leave whole residues of the old structure there so you'd still have all these senior people around. God only knows what they did!

You weren't reviewing Agriculture Department?

No. I told them I wouldn't. I was too close to the bone there. No I wouldn't review Agriculture. I had about five departments to look at. Anyway, after we'd done all that which took us about 6 months I suppose or more, I can't remember. I think it took us about a year to do the task. We then sat down and started to argue about how the whole place should be run. I had an uphill battle with Bruce Guerin and, to a lesser extent, Cathy Branson, about the rights of public servants in the Public Service. They wanted to get rid of all the appeal rights. I fought bitterly against that. Eventually we came to a compromise that the very senior public servants could look after themselves, which was fair enough. But that the appeal system should at least apply up to about the first level of the executive level, we agreed on that eventually. We also agreed on retaining the right of representation by the union of the public servants in any dispute they might have with the management. We changed a lot of things in relation to the structure of recruitment to ensure that equal opportunities operated, that discrimination laws were followed. There was a hell of a lot of discrimination in the Public Service. There was a male culture in several departments. Females were thought of as typists and somebody you might persuade to

take out one night. We made sure that there were changes to the Act which encouraged the employment of females in senior positions on the basis of merit. It was an equal opportunity. You didn't get appointed because you were a female. You got appointed because you were as good as or better than anybody else who had applied, whereas in the past there were all sorts of reasons why you wouldn't appoint a female. The committee came to full agreement on what was to be recommended to the government. It was a well-balanced report which took into account the changing needs of government for Public Service operation. The Crown Law Department drafted the Act which we put a fine tooth comb through and made sure that the Act said what we'd said in the report, which had been accepted by Cabinet – the report. Then it was passed as a government employment Act. I consider that one of my probably most important jobs I'd done for a long time.

It was a job outside the Ag. Department itself.

I wasn't there representing the Ag. Department, no. I was there representing the Service.

Were you on leave from the Department?

No. It just meant I worked longer hours. (laughs) I stayed there as whatever I was at the time. I might have been Director at the time or Chief of Animal Industry, I can't remember.

In that sense it's probably reasonable that you weren't reviewing Agriculture Department for this review?

Very reasonable. I'd had some experience before, I'd been asked by the Public Service Board to chair a committee to review the new forensic laboratory in the Department of Chemistry. They'd built a new building at Divett Place and I was asked to chair a committee to look at the structure and operation of the Department of Chemistry and the forensic laboratory. I discovered that Dickens was still alive. That, in fact, the Department of Chemistry was operated like Bleak House. That the head of the Department sat on top of his stool with a big quill and you had to get permission to pass through the inner sanctum to go to the library, because the door to the library was through the Chief Chemist's office so he kept an eye on whether you took books out or not. It absolutely staggered me the structure of it. In fact, I wanted to preserve it as an icon, but I wasn't allowed to. We had the new attitude in place of having a representative elected by the staff to be on the committee so we knew what the staff thought. That was revolutionary in those days, but I insisted on that, that we had a staff person there so we knew what was going on. It wasn't a head. It had to be somebody who was in the lower ranks because we already had the head of the Department sitting on the committee. He felt he should have been chairman. I came up with a report which I had a lot of input into, which basically totally restructured the operation of the Department of Chemistry and integrated it with the Forensic Science Laboratory so that the facilities could be best utilised. That was

accepted by the Public Service Board and they implemented it. That was an interesting little exercise I did.

You probably ask the question, when did I have time to do Agriculture I suppose? I found time, I found time. But I always insisted, except when I was full-time General Secretary of the PSA, I always insisted that I keep the job I had when I did any of these. Whether I was President of the PSA or doing something, reviewing Monarto or reviewing the Public Service or reviewing the Department of Chemistry, whatever that I kept my job but that I be provided with facilities. This can go on record. When I first became President of the PSA I went down and had discussions with Don Dunstan about my operation, because I had a monthly meeting with the Premier of the State as the President. He said, 'Do you want to be seconded full-time?'. I said, 'No'. 'Cause', he said, 'I can do that'. I said, 'No, no but I do need some facilities. First of all, I would like the facility to have a secretary who could pick up a lot of the things I had to do myself like filing, writing bloody letters which had to be typed and so on. And I'd like transport'. He said 'Right'. He rang the Chairman of the Board and said, 'Fix it up with the Head of the Department that I get a car and I get a secretary'.

They are facilities within the Department?

The Department had to supply it, yes. Wow, did that set a cat amongst the pigeons?! Only the DG had a private secretary. And my private secretary had come out of private enterprise. She was given this typewriter and she said, 'I can't use that. I want an electric typewriter'. I just told the Store Branch to get one. They said, 'You've got to go to the Public Service Board'. I said, 'I don't care. Just get one'. The next thing I had some senior wig from the Public Service Board come around to me and said only DGs get electric typewriters. I said, 'Just wait a minute. I'll ring up the Premier and we'll discuss [it]'.

[33.40] **End of Side A, Tape 4**
Tape 4, Side B

[0:05] It saved me hours.

She was working in the Department?

Yes, full-time for me. When I wasn't there she was boss I told the rest of the dairy mob. I said, 'If you're nice and she says she's got time, she might type a few letters for you' because I said to her, 'If you've got time, you can provide services to the other members of the branch'. Then she left and I got a girl from within the Service. She was a gem this girl from within the Service. I can't think of her name now. I had her for years.

Did she stay on when you came back to your job?

Yes, she stayed on with me and by then the government employment Act allowed other than DG to have secretaries and have motor cars, the very thing that you needed! The motor car was a God send to me because public transport to get down to the PSA, which was down in Gilbert Street, was terrible. Whereas I could pick up my car and be there in about 3 minutes because there might have been I crisis and I'd have to go down there for about an hour to sort it out. Then I could just drive back. Also …

Were you based in ...

I was based in Head Office where the Black Stump is.

In Grenfell Street, so you didn't have a car park there.

Just around the corner, the government car park wasn't far. Also, I had the authority to take my car home and come back to work which meant that I could stay back at work until half past 6 and ring my wife up and say, 'I'll be home in 10 minutes', whereas you normally had to get a bus and you could wait ¾ of an hour. It really did make life bearable to have that little bit of infrastructure support. I was grateful to Don Dunstan that he saw it that way. He was a great man Don Dunstan, a great man. Not because he was Labor. He was just a great man. A wonderful thinker, far-sighted thinker, much more than Bannon. Bannon, he was much … What's the word?

[2:45] Here and now?

Yes. Here and now and I don't want to get too close to anything. He always said he couldn't have got close to the State Bank because it had an independent board set up by an Act. My attitude was that he could have changed the Act to make sure he got close to it, because he'd been warned that things weren't going too well. Of course, it cost him his political career.

Those guys, Don Dunstan and John Bannon, did they have anything to do … Your interaction with them was that anything to do with Agriculture at any time? Dunstan with Monarto was the big dream, but at other times did they ever turn up at Agriculture-type events?

No. They certainly turned up to PSA events that I was involved in but I don't think I ever saw other than the Minister there. I don't think that they saw themselves as needing to be … There might have been some big occasion when they might have come if there was some visiting international, I don't know. But then I might not have been invited anyway.

[4:05] One of the interesting things about the agriculture area is that – the same with water – it's always there. You need water, you need the food. It's always in the background, but it underpins the society we live in.

My belief is that it is in the best interests of the country that we maintain a cost-efficient agricultural industry and that there is justification for some taxpayers' money to be spent on guaranteeing that that happens. The amount that should be spent is a matter of opinion and has varied from where State governments had huge Departments of Agriculture to where there is

much less today. Research has waxed and waned. When I first came to this department the attitude towards research was pretty mundane. They didn't see it as an important role for the State Department of Agriculture. I had to fight fairly hard to get from a little tiny research group into a fairly large research group which got international reputation, by the way, for its quality of research. Today we're SARDI and I don't now how it relates to the Department anymore, but it's still a fairly big organisation. I'm not sure whether it's totally separate and not seen as part of Agriculture, I don't know. But I believe Agriculture can justify taxpayers' investment to ensure that the latest information is available. I don't necessarily mean that the farmers should get a free service. Farmers have got to accept the responsibility that they might have to pay private consultancy for getting information across to them. I don't see anything wrong with that. The basic information, you can't rely on private enterprise to develop it: (a) because they won't because there's not enough money in it, it's different if they develop a new pill, there's millions of dollars in that. So really it's down to the universities and federal and State agricultural-based organisations to continue to investigate the problems of agriculture. That's still as important today as it was 20, 30 years ago. I'm told that farmers are better educated and informed now then they were then. I don't know whether that's true or false. I've no idea, because when I was in the game I would say that the bulk of farmers probably never got past the junior high school.

They learnt on the land.

Yes. I don't know if that's true now or whether they all go and do Roseworthy diplomas or what, I have no idea.

[7:50] One of the things we're looking at in this project is that transition over time. Now you get the situation where in former times the farm would encourage the son or sons to move onto the land. Now there's almost active discouragement in lots of cases – it's too tough and too hard.

It's not a very profitable thing now because, and I go back to my concepts of the marketing boards and authorities, that they kept a lid on the rapacious, greedy middle people, such as supermarkets and agents who sell things and all that sort of thing. They've really got one interest – that is to make as much money as possible for their shareholder or themselves. Marketing boards did at least keep a lid on that either by being monopoly sellers or having the right to fix selling prices or whatever. I can never understand Friedman economics or economic rationalism. It's a false prophet because it takes out of the equation *homo sapiens*. People don't matter in Friedman economics which is the reigning economic theory of today, this economic rationalism. That might have a lot of things going for it but it certainly does not take into consideration the impact upon human beings. I've seen that since they deregulated all the agricultural industries. An awful lot of farmers have gone to the wall because they can't cope with the way in which they've got to sell goods now. Maybe they can't even sell them. I was talking to a fellow I play golf with. He's got a small vineyard and he said, 'I don't even know

whether I'm going to sell any of my grapes this year?'. I said, 'Why did you grow them?'. He said, 'I'm a grape grower'. (laughs)

You've got to keep the crop going.

I said, 'Why don't you grow peanuts or something?'. He said, 'I only know how to grow grapes. My soil's good for growing grapes. I put new varieties in when I think that they might be better. But this year there's such a big surplus of grapes everywhere'. He said, 'I've got half a crop of …' some shiraz that he grows, he's got a contract for that, but he said, 'For the rest of it I've just got to hope that somebody will buy it'. A lot of farmers are in that category where they produce goods and they hope that they'll be bought and sold.

[11.05] It's certainly a very different game now – bigger allotments, diversification ... Come back to where we started today – there's a lot of marketing that goes on, they've got to be able to hit the right markets and they've got to know about it.

But are you an economic rationalist?

That's a good question – no.

It took people out of the equation totally. It just said 'Market forces will determine the prices and all that'. What they didn't say was that the big boys would manipulate market forces to the point where it suited them and nobody else. The supermarkets have done dreadful things in terms of the share.

One of the ironies in something like the Playford government in power in South Australia for so long ...

They believed in marketing authorities.

[12:20] They sustained the market boards and price control. (break in recording) Just to round out today's session, both sessions, perhaps just a quick word on the circumstances of your retirement.

I retired from the Department in 1987, just prior to my 60th birthday because I wanted to have more time with my wife and family. I accepted a compromise at the time that I would become Chairman of the Egg Board, as a part-time chairman, if I retired. I didn't apply for the position of Director-General of Agriculture although as a Director of Animal Services it would have been appropriate, but I didn't want to make that commitment.

(break in recording) Just backtracking a little bit there. There was some background noise … You're going to apply for the DG's job when you were about 60 in 1987.

Yes. When the DG's job came up I was about 57 or 58. I discussed it with my wife. I said, 'There's been people who have said I should apply, that I've got a wide-ranging background that might be of interest to the parties involved'. But I felt that in the unlikely event that I might have been offered the job, I would have had to commit myself for at least 5 years. You can't take a job and then just take the benefits and … I didn't want to commit myself for 5 years, so I

flagged it that I was going to retire at 60. I agreed … The compromise with the Minister of the day – he used to work for me as my Chief Industrial Officer in the PSA, remember firmly.

Kym Mayes.

Kym Mayes, thank you. I agreed with Kym Mayes that I would accept being the Chairman of the Egg Board for a period. So I was appointed to that after my retirement. We went overseas for a holiday and then I came back and got appointed to that position. I was chairman of that for 4 years. I was responsible for bringing the price of eggs down to the consumer to where it was competitive with interstate. The previous board had jacked the price up to where it was untenable. I told the industry that and they didn't like at all. But I said 'You are your own worst enemies. You've jacked the price of quotas up to the highest in Australia. It was $30 or $25 a quota or something for one hen! That's what they were paying farmers who were transferring quotas. I didn't believe that the industry ought to be deregulated. Although both Labor and Liberal Parties had that policy, I said I don't think they could handle it. Anyway when I retired they were still regulated but about a year or two after I retired they deregulated it and 30% of the farmers went broke, which I predicted they would. It was sad from a personal point of view. It causes all sorts of family traumas to go broke.

I didn't regret not applying for the job of DG. I probably wouldn't have gotten it anyway. They still would have appointed John Radcliffe, I don't know. I was asked my opinion as to who ought to get the job and I gave my comments about the two main applicants.

You were going to have to work with him for, in this case, a couple of years?

I was going to have to work with one of them for about 3 years or something. I gave an honest opinion of what I thought of both of the people involved – Pat Harvey and John Radcliffe. They made the decision to appoint John Radcliffe, much to Pat Harvey's surprise. He thought he would get the job. I personally thought if they had to appoint one or the other, and I didn't actually support either for a whole lot of reasons, I thought John Radcliffe would make the much better … Overall, with all his faults, overall, he would make a much better DG than Pat Harvey. I was surprised that the quality of the outside applicants wasn't very high at all. They showed me a list of them and I thought, 'Gee there's not much there'. I don't know whether they pitched the salary too low, I have no idea.

I didn't regret going to part-time work because I was still the director on the Savings and Loans. I put a lot of time into that. We're a very big organisation now, over a billion dollar credit union now. I claim a little bit of a contribution to that because we used to work hard as a board. That with the Egg Board and wanting to enjoy life and travel ... We did a lot of travel overseas after I retired, spent all my money (laughs) but we had a lot of fun, my wife and I.

So post-retirement you maintained some involvement for some time …

The last thing I did was retire from being a member of the Savings and Loans [Board] when I was 70. I thought that was long enough. They wanted me to go on but I said, 'No. You've got to get some new blood in'. This young Bill Cossey, they brought him in. A very young lady who was a lawyer, they were bringing her in. That was all good stuff. They changed the Chief Executive which was good because John Ceroutis who was a very bright fellow, was also a very Greek fellow … and he ended up having to go. They've got a chap now who's a pragmatist – Greg Connor – a very pragmatic fellow and he'll do a good job for the Savings and Loans, so if you're not a member become a member. A very, very sound financial organisation. That was my last … I even resigned from the Labor Party over the way they treated Clarkey, Ralph. He was a sitting member and the factions got rid of him and put somebody else in to win the seat. I thought that was outrageous.

So you severed connections there.

I'm a free agent.

Free agent, but not entirely removed from agriculture because you're still involved with the Retired Officers Group?

I love that yes.

And you're going off on the bus trip?

The bus trip yes. We still talk shop. You can't get rid of it. It's in your blood.

Maybe on the next trip coming up in April this year you might talk a bit of history!

Yes I might do that. We sometimes go back a bit and think about things.

We've taken you back in the couple of sessions now. We've taken you back a fair way and got an overview of your life and times and involvement in the Agriculture Department and so on. Thank you very much for spending the time.

I enjoyed it. I'm sorry that my memory gets a bit confused in the timing of some of these things but you'll sort that out and if you've got any questions that's fine, you can let me know. If I think of anything else … I can't think of anything else that might have happened. I'm sure there have been things that have happened because I have had a wonderful life in that I've worn many hats as Tim [Kucheil said:] he was a pathologist who organised my retirement. The only fellow in the Department who had the Minister of Agriculture come to their retirement. That upset a few people! (laughs) But he came. Tim put on a wonderful show. Apparently at some stage he'd asked me a question, 'When you were President of the PSA and you'd go and see something and then you were in the Department, how did you do that?'. I said, 'I just put the appropriate hat on and I'm that'. We'd had this session and he had all these big black hats and he got different people to come up and he'd put a hat on and he said, 'You're now speaking for

John as a union leader. You are now speaking with John as a reviewer of the Public Service' or whatever it was. I laughed, by gosh I laughed. I've got a tape of it, which I play occasionally.

That's a good touch. If you have any further thoughts or corrections or whatever when the transcript turns up, there's time to add to the record.

OK, thanks.

Thanks John

[22.40] **End of interview**