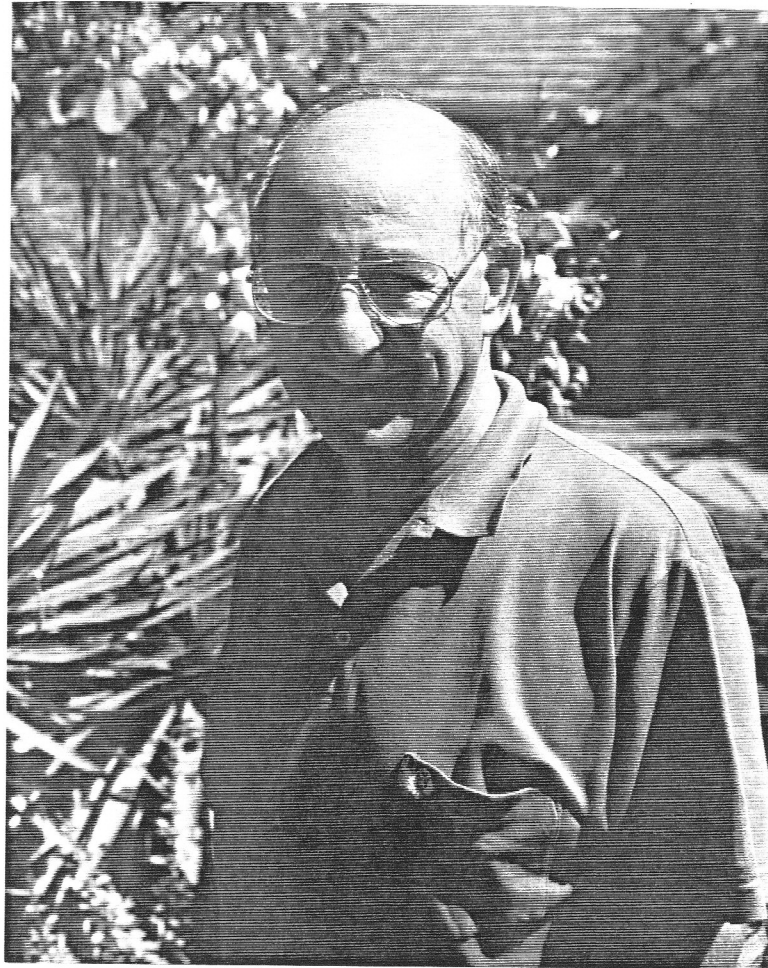


RON MOORE

Ron, born in Sydney in 1934, studied engineering at the University of Sydney and graduated in 1955. He then commenced employment with the Sydney Water Board. Ron married Barbara in 1957 and they had six children. He worked in Canada on the trans-Canada gas pipeline from 1957 to 1963. Ron came back to Australia and, with the Department of Works, was involved with construction of the Bankstown Airport runway. In Canberra he was project engineer for the Bendora Gravity Main. Ron left Works in 1968 to work with the National Capital Development Commission. He stayed with NCDC for twenty years before working as a consulting engineer until retiring in 1997.



Tape 1 Side A

Ron was offered the resident engineer position on the Bendora Gravity Main and he took it. As is mentioned later, it was Jack Purcell [see correspondence section of report] who asked Ron to do the job; Ron had been working on roads and subdivisions for the Department of Works in Canberra to that time.

Ron says of the main 'the topography was horrendous. At the time of course it was fully covered by timber. There were, I think, if my memory serves me, seven separate river crossings [there were a few more], and to each of these was very steep terrain, in fact the steepest slope on the site was some 55 degrees!'. And later 'I stand in admiration for the people who worked on this job', especially the plant operators. The bulldozer drivers never hesitated even on the very steepest slopes.

Access was a major factor. Until the main access track was made, workers used pre-existing roads which were limited. Only once the access road, the camp and better equipment were brought in did real progress begin to be made on the job. The camp

was one of the first priorities for the contractor, because until then workers were coming each day from Canberra and time was being lost. No use was made of the old Bendora camp site. A corrugated iron shed next to the Murrumbidgee bridge at the Cotter Pumping Station was the initial radio control point for the job.

The contractor was Nat Harrison, an American firm, and they worked the job from two headings, almost as two separate contracts. Nat Harrison's project manager was Bob Hawley and he and Ron flew over the route prior to the commencement of work. It was a rather 'exciting' flight.

Weather at first was very wet, and temporary river crossings were washed away several times, making the start to the job even slower. By the end of the job dry weather was assisting things.

The route of the main was benched, then the trench for the pipe was blasted out. Steep grades and cross slopes made the job hard. 'The skill of those dozer operators was paramount.' Cranes were used at first to lay the pipes but were very slow. Then Nat Harrison brought out side-boom pipelayers from the US and things speeded up considerably. Each pipe was about 10 metres long and was electrically welded internally and externally to the next. There were about 15 welders. For the inside weld, fans were used to remove noxious welding fumes and on slopes the welder sat in a harness; if he was a long way up a slope inside the pipe it was a long slide to the bottom if the harness broke. Pipes were laid both uphill and downhill. There were two Works welding inspectors (one was John Ritchie) and inspection was rigorous. Ron also had under him 2 civil engineering inspectors (one being Carl Kloos), and a surveyor, so there were 6 Works staff on the job.

Special pipes were made for certain bends. Only once or twice the specials did not fit. Sometimes pipes were damaged, eg by rockfalls.

Concrete was used for the anchor blocks, cut-off walls and the submerged river crossings. The cut-off walls were on certain slopes to hold the backfill in the trench. A problem occurred on one slope where they were built only on the top of the pipe and not right around [see Jack Purcell correspondence and Graeme Kelleher interview]. The section of trench was backfilled by the contractor but somehow Works discovered the poor work. Nat Harrison's were 'very red faced' and the walls had to be re-done. Ron does not feel the cause was shortage of inspectors.

Each pipe was numbered on arrival and had its own history sheet; inspectors kept a record on each pipe's progress in this way. Inspectors also checked all the trench preparation, laying, and structural concreting.

At the river crossings the river was diverted or channelled and a half of the crossing was done at a time. The pipe was encased in concrete and backfilled. The whole main (except for elevated creek crossings) was backfilled.

A lot of the spoil on the steeper slopes ran down toward the river during the benching. There was concern not to pollute the river, but it was not as strict as would be the case today. Any turbidity in the Cotter would have been treated at the Stromlo treatment works. The Department of Health kept a close eye on sanitation. Ron does not recall having a health test before working in the catchment.

Tape 1 Side B

It was not uncommon for prospective catchment employees to have a health check, so maybe Nat Harrison's workers did have them.

Bob Hawley knew pipelines and brought in US technology. Ron says of Hawley, with whom he worked on a daily basis, 'he was extremely competent'. Some work

preceded Hawley; it was after he arrived that the job gathered impetus. He worked 6 and 7 day weeks. There was another American on the main, and Nat Harrison's vice president came out from the States at one time. Ron does not feel the Americans expressed any superiority. Another engineer with the company was named Stafford; he may have gone on to Western Australia with the company after the main was finished.

Ron says of Carl Kloos that he was 'a gem'. He had come from Europe after the war. He was 'as keen as mustard, very very efficient'.

Ron and Jack Purcell got on well. Purcell loved Jaguar cars.

A fair proportion of the Nat Harrison workforce was made up of migrants. A lot of them would have been off the Snowy scheme. They 'moved around that class of work'. There may have been some women employed in the company's site office at the camp.

The camp consisted of the Works site office, Nat Harrison site office, mess, accommodation, etc. The location of the camp is discussed but is inconclusive [it was located east of where the Pipeline Road crosses the Cotter River]. The buildings had corrugated iron roofs and timber walls. There were no married couples living in the camp; married men commuted to Canberra easily at weekends. Ron lived in Canberra, but saw inside the barracks and says they were not so different to the old workers' camp on Capital Hill in their configuration. Alcohol was available in the camp. Ron recalls the police coming to the camp once or twice. He had lunch in the camp at times and the food was good. Ron occasionally socialised with the Nat Harrison staff at the camp or more likely in Canberra, but not too often. Too much closeness between supervisor and contractor was not advisable: 'you can get caught up...unless you're very careful'.

Once Ron fell into recently poured concrete. It was during one of the river crossing pours. He ended up knee-deep. 'The workers dragged me out and hosed me down with great glee.' Vehicle accidents did not happen often, though once a concrete truck went into a trench.

Ron remembers some stopwork meetings, but there was no extended industrial unrest. 'Safety would have been a prime issue from day one, because of the nature of the site.' The longest stoppage would have been half a day. Main unions were the AWU and TWU.

Ron isn't able to comment on workers' pay, except that they would have got camp and site allowances. His pay with Works was the standard for an engineer in the public service, which was, he says with a laugh, 'never adequate'.

Ron was involved with the valve test on the gravity main at the Murrumbidgee [see also Fitzgerald and Waldron interviews and Sherratt correspondence]. He precedes the description of what happened by commenting that the filling and pressure testing of the main was very drawn out. The main was filled from both ends and crews patrolled the line for leaks. Valves were opened at Stromlo to let water flow through the main. Water hammer occurred and an air valve on the main failed to close, and water gushed out. Gauges at the Cotter Pumping Station on the Murrumbidgee (where the tests were being co-ordinated) showed a leak. 'Something's gone wrong somewhere. By the time we worked out what had happened, we drove back up the line and access roads had disappeared and half the hillside had disappeared.' The backfill and access road had to be repaired. The valve was okay; maybe foreign matter had caught in it and kept it open. Ron is not aware of the problem recurring.

There was no official opening. The main was commissioned in January 1968 after the leakage tests of December 1967 had been completed, though other checks were still being done.

Reflecting on his time on the gravity main, Ron says 'I was very privileged to be involved with the pipeline...It was certainly an experience in my professional career'. It did not seem like a mini Snowy scheme at the time, but could appear so in hindsight. Of the Cotter valley he feels it a shame that the public can't drive into the pipeline area.