

Sue Aitken

Introduction to Geotechnique?

Growing up in a small town in New Zealand, I thought women couldn't be engineers. I initially studied mathematics, obtained a teaching certificate, and taught for a year. Through skiing, I met several engineers and began to see that I could pursue engineering as a career. As a civil engineering undergraduate at the University of Canterbury in Christchurch, I particularly enjoyed my limited exposure to soil mechanics. My American soils professor encouraged me to consider studying geotechnical engineering at the University of Alberta if the chance presented itself. Happily, this did occur and I completed my MSc as a part-time student while my two girls were young.

Other women in your classes?

I was one of three women in a class of 100 in my civil engineering undergraduate program at Canterbury and one of the first five female civil engineers in New Zealand. At the UofA, there was a higher percentage of women in the graduate program, and from those days I will always treasure the friendships that developed, particularly with Angela Küpper.

Difficulty getting your first job?

As a fresh female engineering undergraduate, I encountered two extremes of acceptance: one of skepticism at a city engineering department; the other of novelty at a small boutique consulting engineering firm in Christchurch. This experience was a great start to my career! When I left New Zealand for Canada with my husband in 1979, I found work with a precast concrete fabrication firm in Edmonton. After I graduated with my MSc, I was offered a position with Thurber Engineering in Edmonton. I was quite nervous about re-entering the work environment having been away from it for several years, but I enjoyed the challenges, friendships and learning.

Involvement with CGS and other organizations?

In the early 1990s, I became involved with the CGS's Calgary Geotechnical Society, and then the CGS national body. It is such a body of knowledge for geotechnical engineering; a society to find mentors, colleagues, encounter distinguished practitioners and international gurus, and to follow the latest research.

I started to volunteer with the Association of Professional

Education

- 1974 BSc from University of Otago, NZ, Mathematics; and Diploma from Secondary School Teacher's College, Christchurch, NZ
- 1978 BE (Honours) from University of Canterbury, NZ; Civil Engineering
- 1988 MSc from University of Alberta; Civil/Geotechnical Engineering

Employment

Christchurch, NZ

- 1978-1979 Halliday O'Loughlin & Taylor Ltd.
- ### Edmonton, AB
- 1979-1981 Batoni Structures (1978) Ltd.
 - 1988-1989 Thurber Engineering Ltd.

Calgary, AB

- 1989-1997 AGRA Earth and Environmental
- 1997-1999 Jacques Whitford Associates Ltd.
- 1999-2003 Klohn Crippen Berger Ltd.

Tauranga, NZ

- 2003-present Beca Ltd.

Notable Achievements

- 1967 ATCL (Piano – Performance)
- 1974 Represented NZ in Australia on the NZ Junior Women's Golf Team
- 1975 NZ Under 23 Women's Golf Champion
- 1976 Femineer's Scholarship, NZ, for women studying engineering
- 1997 CGS Service Award (now Stermac Award)
- 2000-2001 President of Association of Professional Engineers, Geologists and Geophysicists of Alberta; first female President in 80-year history
- 2001 Chaired the Alberta Government Commission on Parental Leave
- 2001 Voted as a Top 50 Most Influential Albertans (Alberta Venture)
- 2009 Fellow Engineers Canada
- 2013 Honorary Fellow Geoscience Canada

Engineers and Geoscientists of Alberta (APEGA) in 1982 and was elected President in 2000. This role broadened my perspective on the professional and political aspects of engineering and for this I greatly appreciated the support and skills of then CEO, Neil Windsor.

I have also been a member of the Tunnelling Association of Canada, the Canadian Dam Association, the North American Society of Trenchless Technology and am currently a member of the Australian Institute of Mining and Metallurgy.

Career focus?

Our family moved to Calgary in 1989, where I joined the team at AGRA Earth and Environmental. Working in oil-sands primarily, I became proficient at numerical modelling, particularly in groundwater seepage. My career evolved to working on fascinating projects associated with dams and tailings in Canada, Australia and the Pacific region.

I am now an enthusiastic promoter of the opportunity that dewatering tailings can provide to the mining industry.

Who were your mentors?

There have always been colleagues and clients that I have enjoyed working with and learning from, both in Canada and in New Zealand. I would especially like to mention Bill Chin and Bryan Watts (Klohn Crippen Berger) for sharing their brilliant technical minds, and more recently Cas Boyer (Vale Nouvelle Calédonie) for allowing me to learn more broadly about delivering mining projects by 'walking in my client's shoes'.

On being a woman in a man-dominated profession?

As a woman in engineering, I found some situations a little prickly at times, but honestly, in general I didn't have a problem once a project got going. I think situations are more difficult when you have a project leader or team member who likes to divert blame when the going gets tough.

Advice to other women?

A comment from my friend and fellow student Angela Küpper quite a while ago, "what are the physics?" has been my mantra in work and in challenging young engineers, both male and female.

Photographs



Two wonderful little daughters that were so patient while I studied for my MSc and worked full-time in the mid-1980s.



Sue Aitken (formerly Evison), 2018