FRANCIS GARRITY MSC, BSC

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SUMMARY

I am an adaptable geoprofessional with an ability to provide practical solutions to a variety of engineering and geological problems. I take great pride in producing detailed, professional reports with a rapid turnaround.

I have experience with a variety of software packages including ArcGIS, QGIS, AutoCAD, CLiq, ioGAS, HEC-RAS and the Rocscience suite, among others. In addition I possess advanced skills in statistical analysis and written communication. I am able to quickly acquire new technical skills and constantly seek to refine my competency through the consumption of scientific literature.

My Masters project involved a paleoclimate investigation using self-acquired sediment cores from Miocene maar lake beds in Otago. I completed this project at the end of 2017, graduating with first class honors.

WORK EXPERIENCE

RSC Mining & Mineral Exploration | West Perth | Aug 2018 – Present | *Junior Geologist*

I have completed two contracts as an exploration geologist with RSCMME:

- Dart Mining: I was engaged by Dart Mining to map and sample lithium bearing (LCT) pegmatites in the Dorchap Dyke Swarm, North-East Victoria. During this project I led small teams with the aim of describing and ground-truthing drone and helicopter targets.
- Salt Lake Potash: As an employee with Salt Lake Potash, I oversaw drilling and piezometer installation at two salt lakes in the Goldfields-Esperance region, Western Australia.

Phoenix Consulting Engineers | Waikato, NZ | Nov 2017 – Aug 2018 | *Geotechnical Engineer*

My role at Phoenix Consulting Engineers involved providing analysis and solutions for a variety of geotechnical problems. My responsibilities included providing geotechnical reports in the following areas:

- Liquefaction assessment and reporting (in accordance with MBIE 2017 guidelines and Canterbury technical guidance documents). This includes desktop analysis and the analysis of cone penetrometer data using CLiq v.2.0.
- Stormwater management in accordance with TP010, TP108 and regional and national engineering standards.
- Wastewater system design in accordance with AS/NZS 1547:2012.
- Wind loading and hazard calculations in accordance with AS/NZS 1170.
- Flood hazard assessment and determination of appropriate finished floor levels.
- Preliminary slope hazard assessment and stability modelling using AutoCAD and Slide v7 (ROCSCIENCE).
- Soil type and bearing capacity assessment to determine appropriate foundations and site compliance with NZS 3604:2011; and building platform design in accordance with NZS 4431.

In addition, I was responsible for the following:

- Inspections of building platforms, stormwater systems and foundations.
- Overseeing fieldwork and soil sampling/percolation testing.
- Communication and management of clients and officials.

The University of Waikato | Waikato, NZ | 2016 - 2017 | *Teaching Assistant for Undergraduate Papers*

- Taught undergraduate weather and climate papers.

The University of Waikato | Waikato, NZ | 2016 - 2017 | *Research Assistant for Dr. Chris Lusk*

- Conducted research into the evolution of divaricate plants in New Zealand.

Hamilton Operatic Society | Waikato, NZ | 2013 - 2016 | *Part Time Instrumental Musician (Clarinet) for Opera and Musical Theatre*

EDUCATION

Master of Science (Completed with First Class Honours) | Waikato, NZ | Feb 2016 – Nov 2017 | *Major in Earth Science*

My Masters project involved a paleoclimate investigation using self-acquired sediment cores from Miocene maar lake beds in Otago, New Zealand. Core preparation and analysis on GeoTek MSCL was performed at University of Otago in Jan/Feb 2017. The MSc thesis was completed in November 2017, with first class honours.
As part of this degree I completed six MSc papers, finishing with an 'A+' in two and 'A' in four.

I received several awards during my master's degree studies:

- Environmental Research institute Masters Research Scholarship.
- University of Waikato Taught Post-Graduate Fees Scholarship.
- Top 10% of students in the Faculty of Science and Engineering.

Bachelor of Science | Waikato, NZ | Feb 2013 – Nov 2015 | *Major in Earth Science and Biology*

I completed a double major in earth science and biology. I received the following awards during my undergraduate studies:

- Summer research scholarship to investigate the evolution of divaricate plants in New Zealand.
- Best Completing Undergraduate in Soil Science Award.
- Top 10% of students in the Faculty of Science and Engineering.

PUBLICATIONS

- Garrity, F. D. A. (2017). *Paleoenvironmental Variability during the Middle Miocene Climatic Optimum Reconstructed using a Lake Sediment Record from the Otago Region, New Zealand* (Thesis, Master of Science)
- Garrity, F. D. A. and Lusk, C. (2017). *Independent contrasts reveal climatic relationships of divaricate plants* New Zealand Journal of Botany