The Geoscience Society of New Zealand presents
The 2016 Hochstetter Lecture

Professor Colin Wilson, Victoria University of Wellington
The forensics of volcanic catastrophe: how to study large explosive eruptions

7.30 pm, Thursday 18th of August, MSB 1.01, University of Waikato

Erupting volcanoes are one of the great natural sights on the planet. There are, however, volcanoes on Earth which produce eruptions of such a size and violence (supereruptions at one extreme) that if you can see the volcano erupting you will die. Apart from being somewhat career-limiting, the chances of making useful observations are almost nil. Thus, what we understand about such eruptions and their parent volcanoes has to be gained from studying the products of past events, in a geological form of forensic science. In this talk, I outline the ways in which insights into large explosive eruptions can be gained from studying rocks in the field, then applying a variety of analytical techniques down to the microscopic scale. The information that is gained provides unprecedented details into eruptive processes, but suggests that we are still a long way from having a clear picture of how big eruptions and their parental volcanoes operate.

And supporting lecture:

The Huckleberry Ridge Tuff, Yellowstone: new insights into old deposits

1.10 pm, Friday 19th of August, A.G.30, University of Waikato

The Huckleberry Ridge Tuff is the product of the first great explosive eruptions from the iconic supervolcano at Yellowstone about 2.07 million years ago. Mapped and described by previous workers, this deposit has been part of the geological understanding of the Yellowstone system for many decades. There are, however, many aspects of the deposit and its parental eruption that are un-documented and challenging to understand. In this talk, I will present a series of snapshots of work carried out by me and my collaborators. I will show how you can take an iconic, apparently well-known deposit and uncover new insights about its causative eruption and the parental sub-surface magma chamber.

Colin is a volcanologist who began his career in physical volcanology, but has since strayed into the black arts of petrology and geochemistry. His research is mostly concerned with studying the products of large-scale explosive silicic volcanism, particularly ignimbrites. Trained at Imperial College in the UK, Colin has a long history of work in New Zealand, and is currently Professor of Volcanology at Victoria University of Wellington.