

## Member Spotlight

A monthly highlight featuring an ASEG member. All past member spotlights can be found in our newsletter [archive](#).



We welcome **Kate Selway** under the spotlight in this issue as she shares her enlightening story!

Kate is Managing Director of Vox Geophysics and an Adjunct Associate Professor at the University of Tasmania. Kate is also an active member of ASEG and a **keynote speaker** for the 1<sup>st</sup> ASEG Discover Symposium.

*I wear a couple of different geophysical hats. I'm Managing Director of Vox Geophysics, which I founded about 18 months ago and which specialises in MT consulting to the minerals and geothermal industries. Most of my career has been as a researcher and, although I've left the university sector, I still have some research roles, mostly in Antarctic and Arctic geophysics as an Adjunct Assoc. Prof. at the University of Tasmania.*

### **1. Tell us who you are and what you do.**

*Magnetotellurics has always been the cornerstone of my geophysical work. My focus is helping people make the best use of out of MT by producing good quality models, integrating it with other geophysics, and making meaningful interpretations.*

### **2. For how long have you been a geophysicist?**

*I did my Honours in 2002 and finished my PhD in 2006, so somewhere around the 20-year mark.*

### **3. What do you like most about being a geophysicist?**

*The diversity of the work. I love that I need to have the skills to do everything from repairing instruments, navigating, quickly learning some language from whatever country I'm working in, logistics, people management, coding, writing and accountancy before even*

getting to most of the real 'geophysics' parts of the job. And digging holes - the most important skill of all!

**4. If you weren't a geophysicist, what would you be?**

*I'm interested in all sorts of things and I think I would have enjoyed many paths – serious options included law, astronomy, linguistics and meteorology. However, I don't think any of them would have given me the amazingly wide range of experiences and skills that geophysics has.*

**5. What made you decide to be a geophysicist?**

*Like most of us, I certainly didn't plan on being a geo when I started uni. I was drawn into First Year geology by the field trips, the friendly lecturers who cared about us, the big, interesting questions being addressed, and to appease my dad that I was studying something that might lead to a job. At each decision point, those were probably the same factors that kept me going. I've always worked to try to integrate geology and geophysics but chose to focus on geophysics because I found the uncertainty in geology hard to cope with. There's a lot of uncertainty in geophysics obviously too, but at least it's better quantified!*

**6. What reaction do you mostly get when you tell someone that you are a geophysicist?**

*I recently moved to Perth and this is the first place I've ever lived where I would introduce myself as a geophysicist – so many people working in resources here that the reaction is mostly that their uncle/cousin/friend is a geophysicist! Normally I would introduce myself as an Earth scientist and would tell them that I put sensors on the surface of the earth to see what is inside, like taking an x-ray.*

**7. What aspect of geophysics do you enjoy most?**

*The easy answer is the field work, and I've had incredible opportunities to work in places as remote and diverse as central Australia, East Africa, Antarctica, Svalbard and Greenland. It's a huge privilege to be able to experience these places and it has shaped who I am and how I see my life. However, in a day-to-day sense, I really enjoy the problem solving in geophysics. I think this is at the heart of everything we do, whether that be the conceptual problems like trying to figure out Earth composition without really having enough information, or the practical problems like why my code isn't running, and I love getting stuck into a problem and finally finding a solution.*

**8. Who is your most respected geophysicist?**

*Two geophysicists who we have sadly lost in the last few years were very influential for me – Ted Lilley and Phil Wannamaker. Both had phenomenal intellects but were humble, approachable and patient in sharing their knowledge and experience, and both were very kind and generous to me. They are both great role models who I would be very proud to begin to emulate.*

**9. What is Your funniest or worst field memory?**

*Setting up the portable electric fence around our tent on the Greenland Ice Sheet that was supposed to keep us safe from polar bears. The picture on the box was a farmer putting the fence around some happy sheep on green rolling hills; it couldn't have been more different from the freezing, windblown expanse of ice in front of us. I'm sure the polar bear would have just considered it a warm tingle on its way to the feast! We abandoned it pretty quickly (and luckily didn't get attacked by any bears).*

**10. Where was your best sunrise/sunset location?**

*I've experienced some amazing sunrises and sunsets at the poles, from seeing the sun set for the first time in months at Davis Station after the Antarctic summer, or incredible sun halos and sun dogs after a storm. However, as with most things field work, I think that nothing beats central Australia. Sticking your head out of your swag by some creek-bed somewhere, with the magpies warbling in the gum trees and the sun just beginning to poke above the horizon, is an experience that is hard to beat.*



*Sun halo on the Greenland Ice Sheet with a great field crew and our trusty snowmobiles*

**11. Do you have any volunteering experience?**

*I'm pretty passionate about education and have done a lot of work in science outreach for many years – lots of school visits, Science Week events, and talking to the media when I can. I was Education Chair on the ASEG FedEx for a while but now use that time to run the CAGE camp, which is hugely rewarding but also an enormous amount of work! Geophysics*

*is such a great job and so important to the country, so anything I can do to encourage people down this path is worth it.*

**12. What do you do in your spare time?**

*At the moment, mostly geophysics! CAGE runs at the end of September so this time of year is always very busy. I was very honoured to be asked to give a keynote at the Discover conference, so I'm also working hard running models to make sure I have some interesting results to show everyone. When I can get away from my computer, I love eating delicious food, hiking and running in beautiful spots, sewing and knitting, and waging war against the caterpillars out of my garden.*