# Member Spotlight

A monthly highlight featuring an ASEG member. All past member spotlights can be found in our newsletter <u>archive</u>.



We welcome **Claire Mortimore** under the spotlight in this issue as she shares her enlightening story! Starting with a portrait taken from Koppio, SA.

Claire is an Honour Student at the University of Western Australia.

I'm Claire, I'm 23 years old from Western Australia. I'm passionate about environmental issues and I'm interested in how we can make mining a more environmentally sustainable while still supporting technological and economic progression. I'm always finding a new geoscience topic that interests me. Currently, my focus is directed towards Nickel sulphides and, of course, graphite, owing to my exposure to systems through mineral exploration petrophysics and my interest in EM.

I aspire to establish myself as a geophysicist in the mineral exploration sector. I tend to tackle geological problems with an integrated multidisciplinary approach and I would like to continue to incorporate geological, geophysical, petrophysical and environmental datasets in my future professional projects. I aspire to excel at what I do and to me as a geophysicist that means maintaining a strong focus on the geological context. I hope to continue to meet mentors that challenge my thinking and push me to reach beyond my potential as an early career geoscientist.

#### **General Questions**

#### 1. For how long have you been studying geophysics?

I started out studying geology and environmental science and developed an initial interest in geophysics in my final year when interpreting geophysical datasets for a geological mapping class. From there, I worked in petrophysics and couldn't get enough of geophysics so I came back to study some more!

### 2. Do you have any field experiences?

One of my early career goals was to develop a well-rounded field experience. Field work tends to require a bit of creative thinking as new challenges tend to pop up especially when doing

consulting work to support pilot studies. So far in my early career, I have done geological logging and mapping. I've acquired geophysical and petrophysical data in South Australia, south-west Western Australia and as far north as Tom Price, Western Australia.

I recently took to the field near Port Lincoln in South Australia for a second time (virtually solo) to take petrophysical samples and structural measurements as part of my thesis. A few months previous to this I had acquired Loupe TEM data over the same areas as part of contracted consulting work. I have to say that Port Lincoln would have to be one of my favourite places to be based for field work. The sunrises and the people can't be beaten.





### 3. Do you have any stories to share about your field experience?

In terms of field stories- I've bumped into about every wild and farm animal I can think of from black bulls, to bats to kangaroos and to snakes. I've cross-cut wetlands and rivers collecting EM which resulted in me desperately tying my socks up to the back of the Ute on the way to the next site and learning a tough lesson that you should always pack spare socks when in the field. I've had to rock climb up a steep hill with fairly heavy equipment, I've modified a GPR cart on the fly to accommodate low hanging rock-shelter ceilings, and I've been evacuated from a job when a change in wind direction and velocity meant that a regional bush fire threatened our survey area suddenly on a 40 degree + day.

I was once acquiring geophysical data with two other crew members in a fairly isolated area. We had hired a modern 4WD for the job and left the keys inside temporarily to scope out the area and check the equipment. Not too long after, we came to realise that these newer cars can be self-locking! I'll leave the rest of that story up to your imagination.



Acquiring loupe TEM data (receiver)

# 4. What made you decide to study geophysics/geoscience? Anything you enjoy most?

The geosciences are the most fascinating science. When studying geology, I developed a keen interest in data science. Geophysics allows me to merge my two interests together. I like to think I am a geologist first and geophysics, petrophysics and data science are the tools to help understand complex geological problems.

# 5. What do you usually do in your spare time?

I have always loved keeping active and being outdoors- as most geos do! I have developed quite the passion for long distance running and one of my personal goals for 2024 is to run a half marathon in a time of <2 hours. It came about as a way to keep fit and focused during university semesters.

# 6. What are your career goals in the future?

I am very driven to get good at what I do and work with people who inspire me to push myself beyond what I know I'm capable of. I'd like to dabble into more near-surface environmental geophysics and work on more projects that I can see through from planning to processing and modelling.

#### Your views

# 7. What is a challenge that you see in geoscience today, and how do you see the community overcoming it?

A challenge I see is getting young people interested in geosciences. I believe the issue is, in part, a lack of exposure to geosciences in the school years. The job market for geoscience is great, especially in Western Australia but for some reason these subjects are rarely offered to high-school students. I for one didn't know that geology, especially geophysics, was a viable career path. Last year, I talked to high-school students, promoting geosciences and I know from feedback from these career days, that the science is intriguing to many- especially those who love the outdoors and have a keen interest in how the world works. From these career days, we ended up hiring a student to assist in the Terra Petrophysics laboratory and he is now studying geology as UWA. Establishing geoscience as a widely available subject in the ATAR system in WA would be the most effective way to overcome this challenge in the long term.

# 8. What is the best way that the ASEG could let the public know about geophysics and its benefit to the everyday life?

ASEG could benefit from using social medias that young people frequent. This doesn't have to be fully promotional platform and a mixture between interesting and educational content and promotional content would probably work best to grow the social media platform.

# 9. Do you think AI will take over your job or will the human element remain vital to exploration successes?

I'd like to think that there is a creative thinking component required for best interpretation of geological and geophysical datasets. Instead of thinking of AI as a rival, the industry could benefit from utilising AI as a tool. Nevertheless, given the rapid advancement of AI, it's reasonable to assume that AI could advance to a point where it surpasses human capabilities, both in terms of analysis and creativity.