

This month we shine the spotlight on Phill Wynne; a long-time member of the ACT branch and geophysicist at Geoscience Australia.



Phill Wynne setting up the CG5 gravity meter for a demonstration at Ferry Creek Primary School.

Phill unloading some of the equipment for measuring gravity at one of the Australian Fundamental Gravity Network (AFGN) sites.

1. What is your current role?

Dealing with gravity for Geoscience Australia. I manage the ground gravity database, acquisition via contractors, partnering with the states and Territory for surveys, make the data available to the public (point located data, grids, and compilations of both), plus any questions that come along. As part of that work includes maintaining the Australian Fundamental Gravity Network, a series a reference benchmarks that ties all ground, airborne, and marine surveys together.

2. What do you like most about being a geophysicist?

I think that for me it is seeing is the gradual increase in the understanding of what is there beneath our feet and finding something unexpected that changes the way we think about what is going on. Sometimes I am also fortunate enough to see the result of all that work (from the contractors, states/Territory, and other areas of GA) have a practical effect on people, such as a new water source or an area of new potential mineral or energy resources.

3. What is your best interview tip?

Organise your thoughts when answering, don't rush. Always take a moment before answering a question to make sure you are answering what has been asked, not what you think has been asked. Don't be afraid to ask for clarification if you are not sure what the focus of the question is.

4. What's one thing that we wouldn't know about you?

While I am left-handed, I'm not left footed but slightly right footed. My first step, putting on pants, socks, and shoes, picking up objects with my toes, etc. are all with the right foot/leg. About the only thing I do predominately with my left foot is kick. Apparently, most people that are right-handed are also right footed, but this is less so for left-handed people.

5. Where was your best sunrise/sunset location?

Best sunset was when flying into Broome, sometime around 2007-08. The sun was setting on a cloudless day, touching the horizon and giving the ocean a gold and silver sheen. Best sunrise was north and west of Kalgoorlie in WA. The sun making the clouds look red/purple as if a storm was coming.

6. What are you reading now?

Battleground by Jim Butcher's. It's the 17th book of an urban fantasy series called the Dresden Files set in Chicago. It has a film noir sense of mystery, with comedy, horror, and mythology from all around the world meshed into a very entertaining world. Dresden is a "consulting wizard" that has to deal with everything that a normal PI has to deal with plus the supernatural world. Battleground deals with the fallout of an ancient power declaring war against humanity.

7. Your funniest or worst field memory?

Worst would be having two tires staked at the same time twice in a single day, and then repairing them in 35°C plus temperatures. The only funny experience in the field that has stayed with me for many years is finding a foam esky (it was the late 1990's) nailed halfway up a tree with "supplies" written on the side.

8. Your most respected geophysicist?

While there are several geophysicists that I respect, the one I respect the most is Richard Lane, who unfortunately passed recently. A mountain of knowledge and a willingness to share it to anyone interested, taking the time to explain things. Very meticulous in his works and willing to do tasks that were dull but necessary. Involved in the development of several exploration techniques and processes. I was fortunate enough to work beside and with him over more than 15 years and learnt a great deal from.

9. When you are asked "What's a geophysicist??" or "What does a geophysicist do?" what is your stock answer?

My stock answer has been: We use the physical properties of the earth to better understand the geology to allow us to find what we are looking for or

trying to understand. This will allow us to find minerals, water, or whatever else we are looking for. Different rocks, materials, and structures will have a different density, respond differently to magnets, etc., and it is these changes that we measure to help figure out what is going on.



Photo: Phill Wynne using CG5 a gravity reading at an AFGN site near Young, NSW.

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

In my experience a lot of people seem to think that geophysics either doesn't provide answers, or it provides an exact answer, not that it is a tool that assists you to find an answer. While geophysics can provide a lot of information about what is going on, it doesn't often provide a single "true" answer, with interpretations still requiring someone to go and test the interpretation on the ground. I've used the analogy of a fuzzy picture, with geophysics (plus other disciplines) making the image clearer, but you never quite have all the details for a definitive answer until you go there to see for yourself.

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

I can't see AI taking over the human element for exploration or interpretation any time soon. I do see it AI becoming a tool that will assist people's work in the next 10 years or so. I get the feeling that it'll work like a teacher/student relationship, teach the AI a specific task/pattern recognition, have it search for the pattern, and hand back the areas of interest for someone to investigate further. AI might also have an impact in other areas like data acquisition. For example, the use of drones. Having an AI that can respond to the conditions quickly it would provide a more stable platform allowing for better quality data to be collected.