This issue we get to know Matthew Zengerer, Principal, Gondwana Geoscience. He recently presented a poster that he had prepared for an international conference, to the SA/NT branch of ASEG. You can find a video of this talk here. To find out more about Matt, read on...

1. **What is your current role?**

   I'm the Principal of Gondwana Geoscience, a small geophysical/geoscientific consultancy

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

   For about 18 years

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

   The ability and perception that comes with understanding the physical processes that affect the Earth and the solar system on many different levels.

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

   Probably a bum haha. I would have enjoyed being a full time musician, mathematician or astronomer.

5. **What is your best interview tip?**

   Try and avoid them, but be as clear as you can, make eye contact and try and know your subjects.

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

   My two grandfathers fought on opposing sides in WWII

7. **Tell us about your best field meal?**

   Maybe not the most tasty, but fairly remarkable. I cooked pasta sauce for a bunch of random African villagers as well as camp crew in Mali once, meaning the village women didn't have to make the food for us for once.

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

   Best sunset I have seen was on top of the mountain overlooking Dubrovnik in Croatia..

9. **What are you reading at the moment?**

   The Anubis Gates by Tim Powers. An oldie but a fantasy/steampunk classic.

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

    It was a bit of a secondary direction for me. I was originally studying straight physics and maths, but had a few life hiccups and stopped studying for a while. When I returned, I picked up Earth Science as an extra topic and found that I enjoyed Geology a lot, so it seemed natural to pair it with my Physics background. I didn't think much at the time about what type of work I would ultimately be doing!!

11. **What's one thing you wish someone had told you when you were at university?**

    Don't be too hard on yourself when things don't go your way. Stick to your strengths, and allow time to get back on track. Studying can be like being an athlete.

12. **What's your most treasured textbook?**

    Physics of The Earth is a pretty great solid earth physics textbook

13. **Your funniest or worst field memory?**

    Many involving my friend Andrew, possibly my 2nd year geology mapping trip to Weekeroo where he was imitating an emu in the bush, and then the emu started imitating him!

14. **Your most respected geophysicist?**

    A very difficult question as I have met so many. Alan Reid would have to be up there.

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

I play bass and guitar and sing. I enjoy gigs and festivals and the great outdoors and the beach.

16. **What is a challenge you have overcome and how did you do so?**

    Hmmm, where do I even begin? Probably best to talk about the problem I am discussing at the ASEG Chapter talk. The problem is in interpretation of geophysical /sites/default/files. My thoughts on it go all the way back to 2004 when I was working on interpretation of magnetics data for the GSWA. I discovered a combination of filters (Tilt Angle and Analytical Signal Amplitude) could be draped over one another in ER Mapper, as a variation on standard sunshade TMI or colourdrape 1VD, and gave me amazing insight, but I didn't understand the physical meaning of what I was interpreting at the time and it bothered me. When I worked it out, I applied some similar concepts in understanding interpretation of gravity gradiometry datasets, but the principles of understanding came through performing a lot of 2D and 3D modelling of different objects in different geological settings and observing the characteristic responses, and then relating them back to interpretation /sites/default/files and their physical meaning. Painstaking but ultimately insightful.

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

    I think there is an intergenerational problem creeping up where there is retirement or passing on of many geoscientists with traditional skills, and a younger generation with a slight over-reliance on computer software to teach them to understand geological and geophysical problems. I believe programming and mathematical training remain important teaching techniques for geophysicists, but you can't beat field mapping and structural geology to really teach you how to conceptualise problems in 3 dimensions, for anyone in geoscience.

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

    "You're a What??!!"

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

I usually thump my pint glass on the table and ask them to feel the vibration, then ask them how do they know what the table is made out of. That's if I get to offer a stock answer. Otherwise, I might just say, "I help find Uranium".

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

    I actually think a travelling geoscience open day might be a good idea, or something as part of National Science Week, held in the Museum or somewhere public congregate. Would be good as an annual or biannual event. I also think the general public could get free day exhibition passes to AEGC, but a dedicated event might be more useful.

21. **Where do you think exploration geophysics will head in the next 10-15 years?**

    I think we will see more implementation of satellite and drone technologies, as well as improvements in magnetic and gravity sensing at the quantum scale, and more undersea UAV surveys. Probably less fieldwork overall.

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

    Having just been involved in the Explorer Challenge, I can guarantee the human element remains vitally important