

# HYDRO INTERNATIONAL INTERVIEWS LIEUTENANT MATT TEMPLETON, ELISE BERGSMA, MICHELLE WEIRATHMUELLER AND MOHD ZUKHAIRI ABD LATEF

## Starters in Hydrography

There is a global shortage of hydrographic surveyors. Vacancies and demands for personnel at sea mean surveyors are becoming the most wanted specialists in the offshore world. Institutes of hydrographic education around the world are struggling to attract enough students and companies are taking on students before even they have graduated. We found some students at the start of their careers and asked them what they expected from their life in hydrography. **HI : Why have you decided to become a hydrographer?**

Templeton: I like the balance between the hard days in the field and the challenging evenings working through the collected data.

Bergsma: Although I planned to study medicine or dentistry, I went to the information day at the school of hydrography after reading an article about hydrography. This day was very interesting and I decided to choose hydrography.

Weirathmueller: My interest in the field of hydrography was sparked after doing a fifteen-month work-placement on a construction-support vessel during my undergraduate studies. It seemed like there was a constant updating of technology and techniques. I wanted to be part of something that is evolving so quickly and has an important role in scientific and commercial development.

Zukhairi Abd Latef: It was the oil & gas industry that probably chose me to become a hydrographer. When I studied geomatics at UTM I did not have any ideas about hydrography. When I learnt more about it I discovered that hydrographic knowledge was useful for those who study geomatics to step into the oil & gas industry. Moreover, I like the idea of working outdoors, especially working in the offshore industry.

### **HI : What do you expect from your life as a surveyor over the next three years?**

Templeton: I expect to remain at sea until around 2010, which means about eight to nine months of each year away from home. My current aim is to complete the practical at-sea components of my Cat B qualification in the next six months.

Bergsma: In the short or medium term I don't know what to expect from life as a surveyor. Next year I will have a practical learning period. I hope this will expand my view and knowledge about a life as surveyor.

Weirathmueller: I'll be at UNH finishing my master's. After that I plan to work in research and development. It's a lot of fun working on the water, but I'd like to work behind the scenes and help develop equipment and techniques for use by ocean mappers.

Zukhairi Abd Latef: I am focusing on surveying related to oil and gas activities. Yet this kind of industry involves lots of challenges in technological development, especially for offshore operations.

### **HI : Do you think hydrography can offer a lifetime career?**

Templeton: I think hydrography offers a great long-term career, as there are such a variety of jobs. I hope that during my time I will get to achieve some life goals, such as working in Antarctica, and be able to integrate with other natural sciences.

Bergsma: In the long term I think hydrography will remain important and can offer a lifetime career.

Zukhairi Abd Latef: Within the context of a lifetime career with hydrography I expect that it will offer great opportunities, as long as we can face all the challenges. With a network of experienced people I believe that a hydrographer can face these challenges. I have been fortunate to have some great people as my mentor. I can ask them for advice and get different perspectives on my work.

### **HI : What positive aspects do you expect from your life as a surveyor?**

Templeton: Lots of job satisfaction, and the good stories that go with it.

Bergsma: I like the travelling, going to places all over the world, and I enjoy working on something that interests me.

Zukhairi Abd Latef: Technological developments in surveying, and especially in survey equipment, make the work easier and more accurate. This broadens the application of our work and I expect to work at a global scale.

### **HI : What negative aspects do you expect from your life as a surveyor?**

Templeton: In the long term, the amount of time spent away from home will take its toll. I don't expect that I will be so keen to spend so much time at sea once I have a family.

Bergsma: I think that negative aspects will be the fact that you will not see friends and family very often. Moreover, I expect that working long shifts will be tough.

Zukhairi Abd Latef: In my opinion there are no negative aspects. We have to have a positive mind and try to think in an innovative way. Most young professionals with a geomatics background can get involved in all sorts of earth sciences; for example, geology, GIS, environment, civil engineering etc.

## HI : New students can be attracted to the enjoyment and satisfaction that can be gained from surveying. Have you used training simulators during your education. Can you give us some details about these?

Templeton: The experiences that have encouraged me to become a hydrographer were gained through working on a hydrographic vessel as an Officer of the Watch. I enjoyed being involved in the work, which encouraged me to ask more questions; the rest is history.

Bergsma: Part of the study of hydrography contains nautical aspects. In my education we have simulators to learn how to steer a ship. These are â€˜bridgesâ€™ like real ones, with 180 or 270-degrees view. Further, we have a small ship dedicated to education that we sometimes use for survey activities such as bar-check or sound-velocity profile.

Zukhairi Abd Latef: I learned surveying skills using conventional equipment and the latest technology that is available. In practical sessions I was involved in a flood-mapping study using survey technology. I captured the details using Robotic Total Stations and loaded all the details of a flash-flood area into GIS software for mapping and prediction of potential flood areas.

## HI : How do you view the surveying companies and other organisations that you have had contact with Are these organisations placing enough emphasis on attracting and retaining technical personnel?

Templeton: I believe that you can only have so many incentives to remain in a job before you have to ask yourself if you love the incentives or the job. I donâ€™t think hydrography is a job for people who just want to make a living.

Bergsma: We have been on some excursions to companies; they were all very kind and well aware of the importance of attracting personnel. Iâ€™m looking forward to the time I am going to spend learning practise at a company next year!

My interest is in the oil & gas industry. Most offshore and oil companies have a geomatic team for the seismic-survey operations, for navigation and data QC/QA. I discovered that surveyors work closely in teams with geologists and geophysicists to share knowledge and skills.

## HI : What parts of your education and training have been most useful and what were the most enjoyable?

Templeton: Most useful was the core knowledge of planning and executing a survey. Most enjoyable was one of the practical training tasks using traditional methods such as lead-line and sextant and then inking in the soundings by hand.

Bergsma: I donâ€™t know what part of my education is most useful, but the most enjoyable are the practical case-studies and excursions to companies. Conferences like â€˜Hydroâ€™06â€™, which I was able to attend, are very interesting and useful.

Weirathmueller: Overall, the most useful and enjoyable part of my training was being out at sea. This is what led me to the decision to pursue an ocean-related career. Many courses at school provided valuable tools, but it was putting those tools to use that really started to bring things together.

Zukhairi Abd Latef: I enjoyed the broad scope of hydrography, like seismic surveys, sonar and bathymetric surveys, acoustic positioning and those survey methods usually practised in an offshore environment. Besides that I studied basic geology and petroleum exploration, since some hydrographic surveys like seismic and side-scan sonar require a geological background for interpretation of the data.

## HI : What do you think are the most important skills and personal attributes needed in hydrographic surveying?

Templeton: Good problem-solving skills and an ability to work around problems. No two jobs are the same. You need be prepared to work the long hours and have the patience when things go wrong. A good sense of humour and positive outlook can be a life-saver.

Bergsma: In hydrographic surveying you have to be inventive and curious enough to deal with different situations: making equipment work properly and, even though it may not be the newest, getting it to produce the required resolution.

Weirathmueller: I think that an important skill is the ability to deal with unfamiliar situations, which seem to present themselves every day. Also, and maybe more importantly, is the ability to work well as a team, even in stressful circumstances. Working with the same people in tight spaces for days or weeks could be difficult if people donâ€™t get along.

Zukhairi Abd Latef: As hydrographer you work all around the globe in teams composed of people with different cultures and background. The most important skills and attributes in this world are openness to ideas, listening to others, using open-ended questions and creating an environment where people spread their views and ideas.

## HI : Do you have any suggestions about how to attract more students onto hydrographic courses?

Templeton: I think young people need to see and experience the job before they will ever really understand what we do. I think â€˜sea ridingâ€™ and practical work experience are the best ways to introduce candidates to this job.

Bergsma: I never heard about hydrography before I had to select a course of study. If hydrography was more widely and generally marketed I think many more students would join.

Weirathmueller: Most of the people I have worked with did not start their education or careers planning on being hydrographers. It seems as if a lot of hydrographers come from fields like geology, geography or land surveying and never intended to become offshore surveyors. An information campaign aimed at high-school students could help younger students become aware of the job opportunities.

Zukhairi Abd Latef: To attract students to hydrographic courses we have to show them how hydrography is related to industries such as port development, oil and gas, marine GIS, navigation or vessel tracking.

## The Interviewees

*Lieutenant Matt Templeton* studied Maths, English, Physics and Chemistry in his final years of education in Canberra, Australia. He joined the Navy a few months later. He is recently qualified as hydrographer serving at sea in one of the RAN surveying ships.

*Elise Bergsma* is in her second year of study in Hydrography at the Willem Barentsz Institute on the Island of Terschelling, The Netherlands.

*Michelle Weirathmueller* completed a bachelorâ€™s degree in Geomatics Engineering at the University of New Brunswick in 2005. Her offshore experience includes construction support and marine archaeology survey. She is currently enrolled on a masterâ€™s programme in Ocean Engineering at the University of New Hampshire, Center for Coastal and Ocean Mapping (CCOM).

*Mohd Zukhairi Abd Latef* entered Universiti Teknologi Malaysia (UTM) in 2001 to study Geomatics in the Faculty of Geoinformation Science & Engineering. His final-year project integrated marine GIS for geology with hydrocarbon exploration. He graduated in August 2005 and now works with Fugro Offshore Surveys based in Kuala Lumpur as a hydrographic surveyor and GIS processor.