

Course Report: GUE Recreational Diver 3 (Trimix): 23rd - 30th May 2010

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I will always remember Dive New Zealand magazine issue 111 for the Letters to the Editor page. Mr. Andrew M Underwood had written a strident denouncement of the 'nitrogen narcosis myth', an idea which he claimed was 'ridiculous'. He further claimed that 'having been a diver for over 40 years [I] can state categorically that there is no such thing.' It was strong and passionate stuff and in response the editor had asked Dr. Simon Mitchell to write a suitable reply. Before I had even started reading the reply I knew Mr. Underwood was going to lose. As well as being one of New Zealand's most accomplished technical divers Dr. Simon Mitchell is also a world renowned diving physician. His reply was quite restrained, merely advising Mr Underwood 'to be less categorical about subjects he appears to understand poorly'. I had a bit of a chuckle at that.



However, having been a diver myself for over 20 years it is unfortunately true that Mr. Underwood has plenty of sympathisers. I have met far too many divers who truly believe that nitrogen narcosis either doesn't affect them or doesn't start to have an impact until they get really deep. And when pushed on 'really deep' most will quote depths in excess of 50m, with some quoting 65m+. Given how I feel about narcosis I generally try not to get drawn into conversation with these people as I know the inevitable outcome will be an argument.

I've never doubted the existence of nitrogen narcosis, partly because I believed what the text books told me but mostly because one of my regular dive buddies for the last 15 years quite obviously starts feeling the effects of narcosis from 25m. (Some people have asked me whether Mel is actually narked on the surface, but that's another story!) Having done some deep dives in the English Channel I knew I had also felt the effects of narcosis, but it wasn't until I did my first trimix dives that I truly appreciated how impaired I really was at what most people would consider to be relatively shallow depths.

My first trimix dives were done in the UK, at the same dive sites I had dived using air many times before. The difference was amazing – a clear head, no paranoia brought on by the dark water and far less post dive fatigue - I was a convert immediately. There was just one small problem. Shortly after I started trimix diving I moved here to NZ. It wasn't that moving to NZ was a problem, it was just that in 2007 NZ was a country where open circuit trimix seemed almost non existent. It was clear that if I wanted to go trimix diving then I would have to sort it out for myself from scratch.

Our first problem was getting people to accept that trimix would actually make a difference to their diving. This was a bit chicken and egg – how can they truly appreciate the difference without experiencing trimix, but why would people pay to become qualified without appreciating the difference?? Over time, we met a few like minded divers and converted a few others, then things really started moving last year when we negotiated with various gas suppliers to get access to the correct grade of helium and to bring the cost down. With this, we were able to start blending our own trimix with the help of a friendly dive shop. Then this year we ran our first trimix course, bringing Liam Allen over from Australia to run a GUE Tech 1 class, which meant more trimix qualified diving buddies. The momentum was really starting to get going. Finally we bought a small compressor

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so we could easily recycle our unused gas, further bringing down our costs. We did our first recycling session last week, with big smiles all around.

However, this wasn't the end of the story for me. Although I could now happily dive trimix in NZ and avoid narcosis, it seemed wrong to be advocating the use of trimix in my classes when it was so difficult for my students to become qualified themselves. The final piece of the puzzle was to become a trimix instructor myself.

The GUE Recreational Diver 3 (trimix) course was released by GUE at the end of last year. Designed as a mastery level recreational course it allows students to use trimix and a decompression stage bottle for limited decompression dives. Building on from other GUE classes it is an excellent way to get into trimix diving and start tackling deeper and more complex dives. As soon as the class was released I began the process of becoming an instructor, working with Liam to gain the necessary experience – and in May I was finally signed off.

As it is a fairly new class and was released during the northern hemisphere winter I was intrigued how many Rec 3 classes had been run. When I checked with GUE HQ the answer was none – the first was scheduled for June. Now a fully qualified Rec 3 instructor this was an opportunity I couldn't resist, so with Tom and Peter keen to sign up for the class, together we ran the very first GUE Rec 3 class anywhere in the world!

The Class

The class started much like any other GUE class with an introductory theory session followed by equipment preparation. In addition to the gear Tom and Peter had worn for the Fundamentals class they also had argon bottles attached to their backplates and would be using decompression bottles. As always the theory and gear session is fairly light-hearted and not particularly stressful. As Tom and Peter are both so familiar with their gear now, they went home that first evening feeling quietly confident.



However, although dive 1 is supposedly only a refresher/check out of the skills learned previously it always comes as a surprise to the students. Going through the pre-dive sequence I only had to correct a couple of minor points, but once underwater things headed south very quickly. Maybe it is the stress of suddenly having an instructor watching, maybe people over estimate their skill level, maybe it always takes one dive to settle down – whatever the reason the first dive on most GUE courses is always a bit of a shambles and this was no exception. Tom and Peter were up and down and up and down. With a target depth of 6m on a sloping bottom I managed to clock them at 13.5m, well beyond the level they achieved during the Fundamentals class with me. After 20mins we surfaced for a discussion.

The first comment Peter made was 'Damn, I really thought I was ready for this.' I gave a few tips and we descended again, ready to re run dive 1 for a second time. It was definitely an improvement, although still falling short of what I had seen them achieve previously. After a break we grabbed the deco bottles and got ready for dive two – another run through of basic skills (valve drills, s-drills etc) only this time with an extra bottle slung on the left side. Strangely this extra bottle didn't seem to cause many problems and they had obviously settled into the dive as the skills demonstrations were greatly improved. We ended the day with theory module 2, breathing gas dynamics, which was a much more subdued session than the first one.

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On dive day 2 we met at the lake quite early and started prepping the gear. The aim was to do dives 3 and 4 which introduce the two new major skills for the Rec 3 course – valve failures and gas switches. As we do on all GUE courses we spent considerable time running through dry-runs of each of these, ensuring that everyone knows what to do, how to do it and answering questions. After an hour or so we were ready to dive, at which point Peter commented that he was definitely feeling nervous. For a successful company director that's quite an admission – although putting it into context I have definitely been nervous every time I've been a student on a GUE class. Tom of course didn't say a word – but I knew he was nervous too. After the performance on dives 1 and 2 both of them wanted to prove they really did deserve a trimix qualification – and they did. The two dives were far better and I could see significant improvement. After a very long session at the lake I was happy to move onto the next dives. We ended the day with more theory, this time dive planning and gas management.

For the final four dives we moved locations and settled ourselves in at Northland Dive, hosted fantastically as always by Shane and Julia. Incredibly for the first day we had the boat to ourselves (one of the reasons why I love winter diving in NZ) and we were lucky enough to have a beautiful day. The sea was calm, the sky was blue, the sun was shining – and when we got underwater the vis. was awesome. It was a great day for diving.



The aim of dives 5 and 6 is to practice ascents, firstly from 20m and then from 30m. All the skills from previous dives are reviewed, plus this time Tom and Peter had to show that they could manage an ascent, hitting the correct stops at the correct times and doing the gas switch at the correct depth. In essence this is the most fundamental part of deeper diving – no matter what happens during the dive you always have to ascend and it always needs to be in control. Of course all divers need good ascent skills, but whereas dives within NDIs allow divers to ascend continuously to the surface if desired, decompression dives require mandatory stops at specified depths. If you can't hold your depth during an ascent then you have no business decompression diving.

I was confident they could both do it, but although neither admitted to nerves the boat was definitely very quiet on the way out to the dive site. Again the dives went well and it was clear that as each of them relaxed their skills improved. Unlike the first day when buoyancy control seemed to have vanished Tom and Peter were far better at hitting their target stop depths. As always I had plenty of feedback after the dive, but overall it was a good performance by them both.

We ended the day with the final theory session, decompression dynamics. I think this is the best and most interesting of the theory modules and it also introduces the most new information to the students. On most other dive courses students are usually given one decompression model and shown how to use it. On this course we intentionally discuss different models and run them on different settings, discussing the merits or problems with each. It is always an eye opening experience when students realise that a tiny change in a mathematical formula can cause significant changes in decompression schedules – suddenly the world changes from black and white to a thousand shades of grey. For most divers it is a major landmark in their diving careers.

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When we woke on Sunday morning the weather wasn't as good as before and with a huge weather bomb rapidly approaching we didn't hang about to enjoy a long and lazy breakfast. We had dives 7 and 8 remaining to complete the course and we would be doing both using trimix (21/35) for the first time. There was a definite sense of anticipation and excitement.

As soon as we dropped over the side to do our first dive on the HMNZS Canterbury we knew it was going to be good – we could see the wreck from the surface and the water had that enticing deep blue colour. We sank slowly down and Tom took us for a tour down to the stern of the ship at 37m. Cruising gently along the sand we reached the rudders and glided over the top of the propeller shafts, enjoying clear heads as well as the great vis. It was a beautiful site, but strange as it sounds this was probably one of the very few occasions where I might have preferred a bit less vis. I have always found that bad vis. generates stress and more narcosis and I would have liked to have shown Tom and Peter how trimix negates that. Still, I can't really complain and there will be plenty more opportunities for bad visibility!

For the final dive Peter would be leading and we were going to explore a reef with a wall that dropped to 40m. Along with the great vis. there also seemed to be a lot of fish life around so we had a very picturesque dive with plenty to see as we did our various stops on the way back up. It was a good way to end the course.

Overall, apart from the wobbly start the guys did well, showing considerable improvement throughout and demonstrating they had all the necessary skills to start diving trimix safely. Which means (drum roll please) that Tom and Peter are officially the first people to complete the GUE Rec 3 course anywhere in the world. Big congratulations guys!



So if you want to start diving deeper then you should definitely consider the Rec 3 course. This is the perfect entry point to trimix diving.