

over most other versions of the USN tables and could probably be used for any tables whose residual nitrogen calculations are based on letter groups. Of interest to nitrox divers, Fred plans to produce a multiple set of tables using this “Good Format” for mixes for each 1% increment between 15% and 40%.

## The Bottom Line

If someone else is dictating your bottom time, you need to know how they are determining it and decide if you are comfortable with that. I am ambivalent on tables in general, and the USN tables in particular. I dived USN tables professionally for over 10 years and never saw a hit, even using Graver’s method for multilevel diving, so I’m comfortable with USN times. However, I’m coming up on my 49th birthday and have gradually backed off on my profiles over the last couple of years as a result of the research showing a definite link between age and “bendability.” If I were

diving USN tables, I’d be staying well away from the no-stop limits or adding to stop times by at least one depth level and one time interval on stop-required profiles. This kind of conservatism would put me pretty close to the Canadian DCIEM tables or the Huggins tables.

The arrangement of the numbers isn’t really important to me at this stage in my career, but might be for a newer diver. Fred’s tables are, indeed, a convenient rearrangement of the USN tables with a very clear layout. If I were still teaching students, I’d be tempted to give them a try to see if they were easier to learn than other arrangements.

Fred must feel that the USN limits are too generous for multilevel diving, since he adds his own arbitrary safety factors during dive operations at St. George’s Lodge. I’d rather see him revise his tables and procedures to show the times and

procedures he actually feels comfortable with, instead of reprinting the original limits. On the other hand, Fred obviously believes in allowing the end user to append his own safety factors.

I must admit to an anti-table bias in general. I’m convinced that on a per-dive basis dive computers are safer and a great deal more flexible than any set of tables in the industry, USN included. I haven’t dived lately with anyone using tables — though I did hang out with a Wheel user in Papua New Guinea several years ago — and can’t imagine going back to using tables myself. Being able to pre-plan a multilevel dive (as Good can with tables) seems much less advantageous than being able to alter a dive profile on the fly (as I can with my dive computer).

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# Barracuda Reef

## Illuminated by a Dive Light

Barracuda Reef is a name that holds a variety of emotional content for experienced aficionados of Cozumel diving. Depending on who you’re listening to, diving that particular site north of town (unlike all the others on the island, which are south) is anything from foolhardy madness to the best dive anywhere. Whatever the opinion, adrenaline is always part of it. This is high-adventure diving. The editor of

this publication has said that he always feels ambivalent when he hears of diving Barracuda Reef. He has, after all, had to delete from his subscription list the names of more than one experienced diver who braved the often treacherous currents that give the reef its reputation (and at least part of its appeal), never to be seen again.

The current in Cozumel (usually northerly, parallel to

the coast) each day whisks thousands of divers miles along a smorgasbord of world-famous reefs, from Maracaibo to Villa Blanca Wall. Just north of town, however, the island makes a right turn, but the reef and the current don’t — they go straight on, away from shore. Next stop: Cuba. The currents are often turbulent, inconsistent, different at the surface and at depth, very strong, and always unpredictable.

Why would anyone want to dive such a site? For all the reasons that people want to dive, except perhaps for relaxation. Barracuda Reef is one of the best dives in the world; with so few divers, it is absolutely

virgin. The coral is lush, and in the incredibly clear Cozumel water and light, beautiful beyond description — acres of multi-colored corals covering underwater valleys, mountains, and plains. The chance of encountering sea turtles — green, hawksbill, or loggerhead — approaches certainty, with a high probability of seeing other interesting pelagics, such as eagle rays and sharks. The many and strong attractions of the reef have brought a small number of daring divers to give it a try. A few have paid the ultimate price for their bravado.

For those who want to dive Barracuda at least once (if you dive it once, you'll dive it again), a few of the operations that cater to advanced divers have devised innovative ways to limit the risk of being snatched by the current and lost at sea (see *In Depth*, November 1990, "The Book on Cozumel"). The best method, in my opinion, is to have a snorkeler or two in the water above the divers. The snorkelers follow the divers and the boat follows the snorkelers. This works better than diver-towed dive flags or floats, since the current at the surface is often different than at depth.

Since my first experience at Barracuda in 1989, I've been fortunate to dive it half a dozen more times, and each time has surpassed the memory of previous dives there. On my last trip to Cozumel, local dive instructors Victor Britto and Paul Padilla, knowing my love for Barracuda Reef, suggested that another dive there might be possible if I were interested. If I were interested? You bet! They had a new idea for me, though, one that gave me a moment of sober consideration — a night dive. Barracuda Reef, at night? After about 30 seconds' thought, I

sold myself on the idea. With the right group of experienced, self-sufficient divers, it would be great. The boat could never lose you at night, after all, with dive lights illuminating the water. Let's do it!

Victor was able to assemble just such a group of divers. Two days later, our gang was ready and waiting for a late-afternoon departure. Victor had an extra

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divemaster aboard to ride drag on the small herd of six eager divers that he would lead personally. A snorkeler came along to shadow us from the surface on the first of our two tanks, a late-afternoon/twilight dive. Victor suggested that we first dive the deep wall at Barracuda, since the current looked fairly benign from the surface, showing none of the roiling or large flat upcurrent telltales that hint at turbulent conditions below. Loaded up, we headed north from the ProDive pier to the nearby entry point. We were ready to go.

We entered the water as a group and immediately descended over the sand just inshore from the large ridge that delineates the reef from the abyss. With everyone okay, we made the wall and went over into the current. We found it as tranquil as it had appeared

from the surface — barely one knot, and straight along the wall. We each descended to our deepest depth, staying in a loose group spread out vertically as well as horizontally. We planned a slow and constant ascent along the wall, then a period at the top of the mountain, until time and/or air forced an ascent to our safety stop.

The plan was perfect; the dive was perfect. With 150-foot visibility and lots of light from the late-afternoon sun, it was beautiful. While human springbreakers were just beginning to arrive at topside beaches around the world, underwater school was already in session. Big groups of schooling fish, jacks of all sizes, large black-and-silver margates, and squadrons of a dozen or more large amberjacks were everywhere, even a good number of the large barracuda that give the reef its name. A 10-foot nurse shark lazily made way for us as we explored the wall. We found several turtles, including the biggest loggerhead I've ever seen. Not being disturbed as frequently by divers as at the more heavily dived sites, these turtles were much more approachable than most. The highlight of the dive, however, was a huge school of big horse-eye jacks circling around and above us in the sun — hundreds of them. It looked just like those famous shots that David Doubilet seems to manage so frequently but which are so elusive for the rest of us struggling underwater photographers. We swam off the mountain and over the sand in a slow ascent to our safety stop. The snorkeler and boat, visible throughout the dive, were right there waiting for us. What a dive!

We spent a relaxing, contemplative surface interval blowing off nitrogen, snacking on fresh tropical fruits, and watching a

rare cloudless Cozumel sunset. With the onset of full darkness, we geared up for our night dive on Barracuda Reef. The plan was to enter above the reef and then dive the rolling plains at the end of San Juan Reef and let the current take us to Barracuda. Except for the fact that the current was now up to perhaps 5 knots, the plan would have worked perfectly. Instead, we had a quick roller-coaster ride.

It was both thrilling and frustrating. As we followed the reef like a ground-hugging cruise missile, our fast, rolling flight required us to direct our attention ahead. Our rapidly moving world was limited to a small cone of dive-light-illuminated space. Critters and reef structures loomed out of the dark, then quickly faded. Everyone stayed in sight of one another's moving lights, but more personal diver interaction was simply not possible. Each of us experienced a different dive, depending on what the reef offered up in his path. Two of us saw a large shark of undetermined species (though we agreed it was over 8 feet long and a real shark, not a nurse shark). Most of the divers came upon sleeping turtles. The jacks were still around, and like a squadron of fighter planes harassing a B-29, kept buzzing in and out of view — flashes of brilliant reflected silver in the dive lights. It felt much like an X-wing fighter attack on the surface of the Death Star.

About 30 minutes into the dive, the terrain signaled the end as the bottom began to drop away quickly from its previous depth of 60 or 70 feet. Several followed it to almost 100 feet before we could get their attention and come together once again as a group.

The boat's lights revealed its position — it had easily fol-

lowed our lights — and we made a leisurely group safety stop as the bottom fell away to 3,500 feet. Back aboard, all agreed that this night's dive had been a real high point in everyone's experience.

Would I dive Barracuda Reef again at night? With the pre-

cautions outlined and with the right leaders (I have complete confidence in few humans, but Victor Britto and Paul Padilla are two I trust), I'd do it again, gladly. And again, and again. . . .



## A Double Standard Experience

Dear Editor:

I'd like to add my support to the letter you published in the March '94 issue regarding different standards for experienced divers and novices (beginners, flaming dorks, or whatever). I am upset at spending significant amounts of time and money for a dive vacation and being forced to dive a profile that is unsatisfactory and unnecessary for an experienced, competent diver.

It would be a great help to have information about this aspect of dive operations as part of your reviews.

If I could start the feedback in this direction, I'd like to report on a recent trip to the Turks and Caicos, where they used a procedure I felt was comfortable for everyone involved. The dive operation was Dive Provo at the Ramada Turquoise Reef. Each dive was set up with maximum depth and time restrictions — if you were diving via tables. You could go with a guided group or on your own, but you had to adhere to the restrictions. They weren't obsessive about it, though; if you were a couple of minutes late or a few pounds short of 500 psi, they didn't hassle you.

If you had a computer, and a buddy with a computer, you could dive the profile you wanted. There was always someone I could buddy with who was also using a computer, and we were left to our own devices. In one case, three of us went as a buddy triple because we were the only three computer divers on board.

I dove two days with a guy who was constantly trying to push the limit of his air, depth, and time, and the divemasters did get a bit upset with him. I think they felt he was pushing toward a dangerous profile for no real reason, and finally refused to let him in for a second dive on the second day. He never really crossed the line but was always up against it. Maybe some people would be upset at their decision, but they had warned him in advance and I'm not sure that I wouldn't have done the same thing had it been my responsibility. But overall, I thought they gave a good balance to respecting the wishes and skills of the more experienced divers while still protecting themselves from dangerous situations.

— Bob Pike, Fayetteville, NY