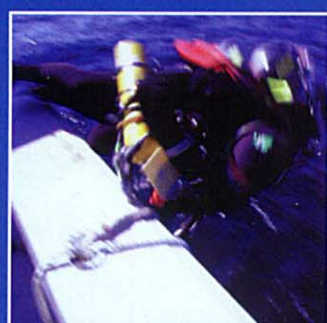
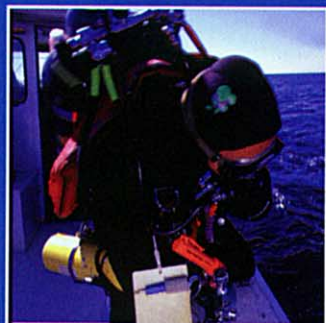


83 Fathoms to

TEXT BY KEN CLAYTON • PHOTOGRAPHY BY CHRIS CRUMLEY

*“Half a league,
half a league,
half a league onward...”*

— Alfred, Lord Tennyson



These opening lines of Tennyson's immortal poem *The Charge of the Light Brigade* repeatedly passed through my mind as I drove through the Virginia and North Carolina countryside the evening of October 24, 1998. The last act was being played out in a drama that had begun more than two years before. It was also the latest chapter in an ongoing personal crusade to promote deep shipwreck exploration and to vindicate extended range diving.

It all started innocently enough: an open-water certification just to see some pretty fish on a reef. Then my devious open-water instructor introduced me to wreck diving. The addiction was immediate and irreversible. Next came a heavy dosage of cave diving for buoyancy skills and an application of the Hogarthian principles was an excellent confidence builder.

The wreck diving scene started with the usual tour of the pillaged, plundered, looted, defiled, and frequently wire-dragged and smashed offerings of the cattle boat or six-pack purveyors. This got boring quickly. Something more challenging or original was needed. Thus followed the *Doria*, the *Monitor* and first-ever dives on the *E.M. Clark* and the unfinished battleship, *USS Washington (BB-47)*.

Where to next? Well, fortuitous encounters with Gary Gentile while diving the *USS Wilkes Barre* brought out the fact that we had a mutual interest. We both wanted to locate and possibly dive on the confiscated World War I German warships that Gen. Billy Mitchell and the US Navy had sunk in bombing demonstrations off the Virginia capes in 1921. We agreed to combine our energies and to co-lead a project

to find and dive on the best-known of the Mitchell targets, the battleship *SMS Ostfriesland*.

We did this dive in 1990. Success fueled the fires of ambition. We decided to find the remaining German warships and to throw in for good measure the two obsolete US battleships (the *USS Virginia (BB-13)* and the *USS New Jersey (BB-16)*) that General Mitchell scuttled off Cape Hatteras, North Carolina in 1923.

However, it quickly became clear that Gary's many projects as a lecturer, writer and photographer prevented him from spending much time on any single endeavor. So I took over and assumed sole responsibility for the research, planning and leadership of the project. Seven years were consumed before we finally found and dove on the last undiscovered ship. I was providentially

favored to be the only one to dive on all 10 of the ships. So, for the record, the ships and their depths are as follows:

German:

SMS Ostfriesland – 380 feet
Frankfurt – 415 feet
G-102 – 355 feet
V-43 – 390 feet
S-132 – 390 feet
U-117 – 235 feet
U-140 – 265 feet
UB-148 – 275 feet

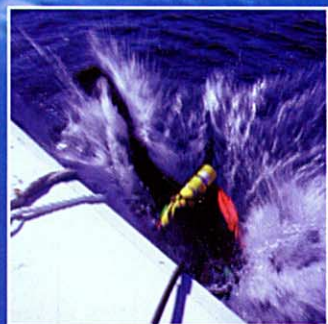
American:

USS New Jersey – 335 feet
USS Virginia – 390 feet

Also for the record, more than 40 East Coast wreck divers have made over 150 total dives on these wrecks. So far we have had only one case of serious decompression sickness.

This project also offered the opportunity to make field tests of mixed gas theory. Under the supervision of Dr.

Glory



R.W. "Bill" Hamilton, our technical advisor, many different combinations of bottom mixes and decompression gasses were tried. Heliox, heliair, trimix, argon, many variations of nitrox and (thanks to the generosity of Praxair Inc.) neon were all used in various applications.

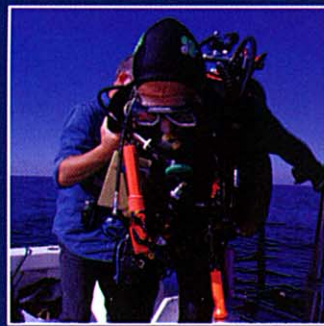
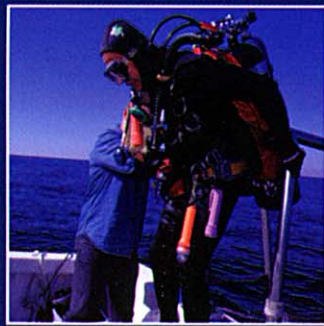
My experiences during the project vividly illustrated the inadequacy of textbook/classroom theory in preparing the diver to navigate through the challenges of a "hi-tech" expedition. Certification certainly does not mean qualification. Factors such as cost; environmental characteristics; available support staff and equipment; personal, physical and psychological condition; and individual skill levels must all be weighed before a viable plan can be put together.

With the Billy Mitchell project almost complete, we

looked for new challenges. The offshore North Carolina area looked inviting but very testing. The most obvious undived wreck was way out in the capricious Gulf Stream in almost 500 feet of water. This wreck, the *Panam*, had the dubious distinction of being the second-from-the-last ship torpedoed off North Carolina during World War II. It went down on May 4, 1943.

Frustrating experience had shown the futility of setting offshore dive dates. However, in 1995 the National Hurricane Center in Miami had generously, free of charge, prepared for me six pages of graphs analyzing six years of data on Gulf Stream speeds at different locations

Clayton descends towards the 500-foot-deep *Panam*. This was the second-to-last ship torpedoed off the East Coast during World War II.



over the calendar year. In addition, the center also produced every three days (since discontinued) a six-page report showing current Gulf Stream locations, temperatures, etc.

However, even at its lowest average speeds the Gulf Stream is impossible to swim against. There remained one additional possibility: through the years, local fishermen have observed that a strong northeaster – minimum 25-knot winds – passing through the area for at least two or three days tended to push the Stream offshore. A short window would open after both the wind and waves had decreased and a dive could be made before the Stream came roaring back. The desired northeasters usually come through in early spring and the fall.

With all this data in mind, I put together a 24-hour response team of main and support divers ready to converge on North Carolina whenever conditions were ideal. Events were now set in motion for what was to be a devastating tragedy.

Ultimately, however, it would become a lifetime's achievement.

The first chance to dive came in May of 1995, but marginal sea conditions and too short a current window were insurmountable. The next shot came in June of 1996. On the target day, sea conditions seemed optimal: very little current, two-foot seas, and emerging sunshine. What could go wrong?

After gearing up, our on-

board photojournalist entered the water first to document part of the descent. I entered next and had an eight-minute wait to relax before my partner entered. He, however, opted for an immediate descent and followed about 30 feet behind me.

At 200 feet, with him still lagging even farther behind, I switched from air to my bottom mix. At 325 feet, the *Panam* came into view. I pointed it out to my buddy, still some distance above me.

I never saw him again after that. No sight or sound of a problem had arisen. Except for a solitary amberjack, no marine life was around. An evening, night and next-morning Coast Guard search produced nothing.

I had turned my descent at 456 feet, about 10 feet off the deck of the *Panam*, because I had reached my gas consumption turnaround point. Another 75 feet of anchor line still remained to be traversed.

Not until the captain and support team sent down a slate message at 100 feet did I become completely aware of the disaster. Three years later I still have only one theory as to its cause.

Years before, when researching deep diving, Jim Stewart of Scripps had related a similar but non-fatal incident that had befallen his partner when they were diving in only 200+ feet of water in the La Jolla Canyon. Jim warned about the possibility of blackout at depth due to CO₂ buildup. The Rev. Dr. Ed Lanphier, a leading authority

on CO₂, subsequently gave the same warning. Because of these warnings, and because of faxes from the NHC, indicated 78°F surface temperatures at the *Panam* site, I opted to wear a wetsuit to reduce drag. My partner declined and wore a bulky drysuit. In addition, he was pushing a large underwater camera. We both were carrying five tanks. Over 700 feet of anchor line and chain were out. My theory is that he overexerted himself, built up a load of CO₂ and blacked out.

Immediately after the tragedy, the Internet was full of vicious, insensitive, frequently profane hyperbole and outright slander. Both our boat captain and I were targets.

I was incensed over the debasing of the captain who, in my opinion, had done an irreproachable job in monitoring the sea and weather conditions prior to the dive and in the discharge of his responsibilities during the dive. In any case, I felt another attempt should be made to validate our style of diving and for my own vindication.

The biggest problem was finding a charter boat willing to host the attempt. The original captain had been dissuaded by the vicious attacks. But finally in 1998 we found two progressive-thinking captains willing to help. Our weather and current watch began in May.

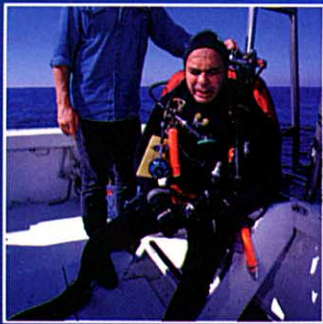
Some configuration and operational changes were made to those techniques used on the 1996 trip. Instead of high-pressure Genesis

120s, over-filled low pressure OMS 125s were used for the bottom mix of heliair 10/52.

One Internet communicant wondered why not 10/75 to reduce the expected narcosis using heliair. There were several reasons. First, it was simpler to mix the heliair, as opposed to heliox. Second, I wanted 3500 PSI in the tanks as well as a PO₂ of 1.6 ata at 495 feet. This meant I was locked into the 10/52 percentage. Third, I have a lot of deep air experience and subsequently a high narcosis tolerance. With this in mind, the dive plan was kept simple with no complicated tasks (possible contingencies notwithstanding).

And finally, the most compelling reason to use the heliair mix is hanging on the wall of the North Carolina Nautical Museum in Beaufort. It is the front half of a 15.5-foot, 2000-pound great white shark taken in the area of the *Panam* in 1984. I had no desire to get in an argument with a great white about who belongs at the top of the food chain! The computer program I use, Migplan, shows an increase of 20 minutes in deco time with 75% helium over 52%. It's a prime example of how theory and textbooks are not sufficient in making practical diving decisions.

Deco gases were air, EAN40 and EAN80. In 1996 I carried the air and EAN40 in two Scubapro slimline 71.4s and a 30 pony. This time I decided to carry only air in 40 and 30 ponies and to have the EAN40 brought down to me by



Correcting for freshwater calibration, Clayton touched the deck at 495 feet. It cost him more than two hours of deco (right).

my most trusted support diver (who was also backed up). EAN80 was supplied from the boat. All gases were backed up with duplicates hanging on lines. With the continued development of cloning technology, in another decade or less I also would have been backed up.

Spring and summer went by with no opportunity to dive. And then suddenly, it all started to happen the week of

October 20. The long-awaited northeaster came through and we picked Sunday, October 25 as the day of reckoning. As fate would have it, my partner would not be able to dive. This confirmed a premonition I'd had for the past two-and-a-half years that I was somehow destined to make this dive solo.

So with no hesitation, we continued to prepare. Lt. Col. Jeff Hewlett, USAF, and Lt.

Kirk Mondlak, USN, were my support crew. Captain Gordon Smith of the *Bottom Time* hosted the trip. His mate, Brian Moore, provided additional support. Photojournalist Chris Crumley was aboard to record the event.

So the afternoon and evening of October 24, I headed south swamped with thoughts of fate, destiny, providence, family, friends and enemies. "Forward the

Light Brigade! / All in the valley of Death / Rode the six hundred." The weather seemed auspicious. As I crossed the Neuse river, the late evening sun created a golden pathway on the water. But was it for a golden success or the primrose path?


We embarked promptly at 5:00 a.m. Sunday. Conditions were absolutely brilliant. Arriving on site we found no water movement, one-foot

tom timer and depth gauge, read 505 feet. The other, a new Beuchat (not UWATEC) MCD2 read 511 feet. Subtracting three percent for seawater vs. freshwater calibration, I was at about 495 feet. This matched the dive boats' fathometer.

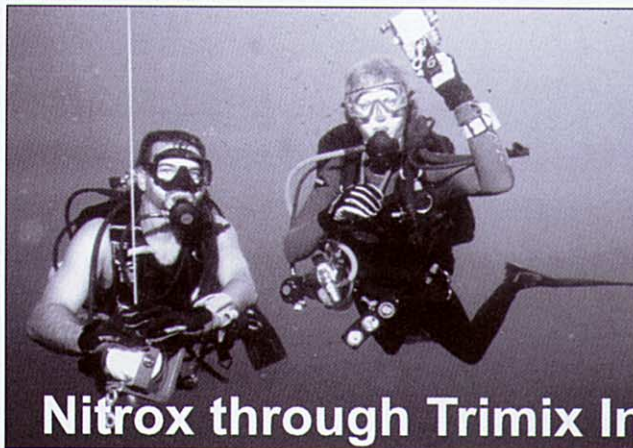
Too soon it was time to ascend. The anchor line made a pleasant, straight, steep juncture with the wreck with no catenary effect as in 1996. Surrounded by the amberjacks, I picked up my strobe and headed up. First stop, on air, was at 200 feet and I could see my support diver waiting at 150 to clip on my EAN40 tank, which I would use at 100 feet.

I was one minute late in my schedule. However, to allay concerns, we had strapped one Techtite strobe to my main tanks and the other I had clipped to my side so the support diver could see me from a distance and be assured I was ascending. The rest of the two-hour decompression went without incident. One support diver was present at all times. As I climbed the boat ladder, remembering a line from a James Bond movie, I saluted and asked the captain for permission to come aboard. My lips were so tired, though, I could hardly get the words out. We all laughed.

Everything had gone perfectly. We sailed into port just before dusk to have a celebration at the local Golden Corral. I am sure the armchair critics, pessimists and self-appointed judges will have a field day with this dive. In defense, I will simply quote part of an address entitled "Citizenship in the Republic" given by then-ex-president Theodore Roosevelt at the Sorbonne in Paris on April 23, 1910:

"It's not the critic that counts, not the man who points out how the strong man stumbled or whether the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood, who strives valiantly, who errs, and often comes up short again and again, who knows the great enthusiasms, the great devotions and spends himself in a worthy cause, and who, if at best in the end, knows the triumph of higher treatment and high achievement. And who at worst, if he fails, at least fails while daring greatly so that his soul shall never be with those cold and timid ones who know neither victory nor defeat." 

Ken Clayton is an avid wreck and cave diver living in Virginia. His upcoming projects include diving an unknown 500-foot-deep wreck off North Carolina and the U-576 WWII German submarine at 600 feet.



DEPTH PERCEPTION DIVE CENTER

10075 E. Adamo Dr.
Tampa, FL 33619
Hwy 60 at I-75
813-689-3483
Fax 813-661-5621
E-mail: divedpdc@gte.net
Website:
<http://home1.get.net/divedpdc>

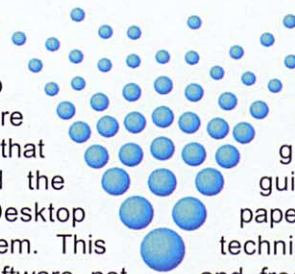
**Specializing in
Cave/Cavern
Instruction**

Nitrox through Trimix Instruction

Deep Down We've Got What It Takes!

[And We Work Great Under Pressure]

Although our ad may be a bit on the humorous side, when it comes to technical diving, we are completely serious, that is why we created the Voyager Desktop Decompression System. This revolutionary new software not only provides 169 bailout schedules with a single click of the mouse, but also includes new features like the Water Column Tool and the Dive Wizard to assist in planning even the most



VOYAGER

with Windows 3.x, Windows 95, and Apple Macintosh. Visit <http://www.DiveVoyager.com> to download the current version of Voyager or call for the location of a dealer near you.

technical dives. What's more, with Voyager you receive a complete software package, 140 page user guide, trouble shooting guide, water proof laser paper, access to professional technical support personnel, and free upgrades. Compatible with Windows 3.x, Windows 95, and Apple Macintosh. Visit <http://www.DiveVoyager.com> to download the current version of Voyager or call for the location of a dealer near you.

Mix Master II for Windows Now Available!

The next generation of the popular gas blending program is now available for Windows. Mix or balance any Nitrox or Trimix mixture with speed and accuracy. Metric and Imperial.



**DIVERSE
TECHNOLOGIES, INC.**

2440 East Commercial Blvd Suite 5
Fort Lauderdale, Florida 33308 USA
Ph: 954.776.7334 Fax: 954.776.1624