

# MARINE TECHNOLOGY

REPORTER

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## Unmanned Vehicles



Arctic

**Efficient Under Ice**

AUVs

**Autonomy Grows**

ROVs

**Evolving Missions**

Floating Production Systems  
**Impact of \$50 Oil**

# Tim Taylor, Tiburon Subsea



*Tim Taylor is an accomplished ocean explorer, businessman and entrepreneur. He has owned and operated his own companies in the marine industry for 30 years, work which has always included applying innovative diving technologies, and he has developed a reputation for leading underwater expeditions that add to the scientific knowledge in the fields of oceanography, archaeology, biology and geology. His explorations have taken on many forms, but pushing the boundaries with new technology has been a consistent driving force, and the use of Autonomous Underwater Vehicles (AUVs) is a logical path in his underwater exploration. His most recent accomplishment was the discovery, exploration, and documentation of the WWI submarine USS R-12 that was lost in WWII in 600 ft. of water. A Fellow in the Explorers Club, in 2008 he was awarded the club's prestigious Citation of Merit in recognition of his explorations.*

## **How did you get involved in this industry?**

I have been interested in exploration my entire life, and it has been a series of progressive steps from physical exploration taking me to limits and wanting to go further. My role has always been to facilitate the actual exploration. Whether it was for shark biologists, geologist, archaeologist or the film industry we provided the skills and equipment to get on location and accomplish the task. Years of support in underwater operations and explorations aboard my company's research vessels has given us the hands-on field knowledge of a broad base of disciplines. When opportunity was presented to go deeper and use the latest technology, I was always at the front of the line. Managing and mitigating risk while executing the mission on the high seas was my way of life for 30 years. To me, this new company was a logical career progression.

## **What happened to your research vessel?**

The U.S. Navy Warfare Center made me an offer I could not refuse. They needed a good support platform to test AUV's and ROV's. Over the years we totally re-designed and added many special features into the "Tiburon" that turned her into a specialized exploration platform. The work we were performing on the Tiburon was exactly what the Navy was looking to accomplish. She was a tried and true platform. After 18 years of adventures from Cuba, Bahamas, Mexico and extended multi-week expeditions 200 miles offshore I could not think of a better place for her next mission.

## **What is Tiburon Subsea?**

Tiburon Subsea is a new company that is structured to scale and fill the technical equipment needs of the marine industry, with our focus on Autonomous Underwater Vehicles. That means investment and infrastructure that allows the newest technology to finally gain the traction it requires to break

(Image: Tiburon Subsea)

### OceanServer AUV for Tiburon

Tiburon Subsea took delivery of OceanServer IVER3-580 Autonomous Underwater Vehicle (AUV), the first of multiple vehicles being offered for rent to third party operators. Tiburon Subsea is implementing extensive vehicle specific AUV training programs and offering full operator support services with all its AUV rentals. Tiburon Subsea provides global underwater technology rental, training and support services with a focus on AUVs. The IVER3-580 is equipped with L3 Klein 3500 bathymetric/side scan and Marine Magnetics-Explorer magnetometer.

out into the commercial sector. Going beyond military applications and making autonomous equipment available on a timely reliable basis is our focus. With these tools available to marine companies on a reliable basis, the possibilities and advantages will really be evident.

#### Describe Tiburon's current AUV fleet.

The first vehicle is off the line now; the next five systems are in the pipe line. We expect a total of six high-end 200m bathymetric, side scan with payload options that include magnetometer, camera, side scan sonar and bathymetric sonar by the end of the year. It should be said that every fleet needs operators. We are also developing training and certification programs along with field support that will allow us to put these systems in the hands of engineering companies with qualified personnel.

#### We understand that you have a plan for making AUV's quickly and easily accessible to an international clientele through your company's rental fleet, training programs and operators.

Client defined vehicles. We keep an open eye on the market needs as well as the businesses that are using our systems. We want to provide the equipment and payloads that the end client needs. In effect, the market will help define the specific equipment that we offer. Our future fleet makeup will be determined in large part by utilization. An example: if post disaster survey of waterways for obstructions is a strong demand, a

fleet of smaller AUV's will evolve. Allowing one person/team to launch four to eight vehicles at one time. Think of the area that can be covered in a short time. When disaster strikes the faster a survey can be done, the faster recovery can begin. Streamlining as much as possible so the marine service provider can focus on the job rather than the many details. No lead time, comprehensive training and continuing education, 24/7 field and technical support, redundancy, international equipment passports (carnets), bonds and insurance already in place are just a few of the benefits of contracting our AUV systems.

#### By market, what do you see as the big drivers for AUV use today and in the coming years?

Two words: Energy & Environmental

#### What technologies do you think have helped to evolve the use and capability of AUVs the most in recent years.

Integration and miniaturization of payloads by third parties. Navigation solutions have allowed the smaller AUV's to evolve into practice tools. Overcoming navigation issues has always been a factor in all underwater robotic endeavors. We have several commercial navigation solutions that will be rolled out in near future that will be included in all our systems. In fact, with this in mind, we are future-proofing our fleet and building all our initial systems with 200m depth ratings and space to accommodate the added systems on the horizon.