

From Small  
Fish to Oceans  
of Opportunity

# The Story of Ocean Optics Inc.

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It was 1986, and Michael Morris, now president of Ocean Optics Inc. (OOI) of Dunedin, Fla., was working at the technology transfer office at the University of Southern Florida (USF). Morris and his wife Linda had borrowed \$10,000 from Morris' mother in order to launch a company called pHish Doctor, which supplied pH sensors for aquariums at \$0.35/piece. pHish Doctor was how Morris got his feet wet, so to speak, as a business-owner. Through this company, Morris sold more than 100,000 units, and his mother converted her loan into stock in Morris' next business venture.

In 1989, Morris teamed with USF scientists Robert Byrne and Luis Garcia-Rubio, and Roy Walters from the University of Central Florida to develop a fiber optic pH sensor for seawater. The team responded to a solicitation from the Small Business Innovative Research (SBIR) program, through the U.S. Department of Energy (DOE), calling for a sensor that could help evaluate the ocean's role in global warming. They were awarded with a Phase I and Phase II grant, as well as other SBIR grants—including one for measuring the optical backscattering created by marine snow—totaling \$1.2 million.



Representatives from Ocean Optics Inc. were invited to the Smithsonian Museum of Natural History to assist with fluorescence experiments using the Hope and Blue Heart Diamonds.

Ocean Optics Inc.

Two years passed, and the first phase II grant was nearing completion. The team decided to participate in a DOE commercialization program intended to help grant recipients to get out of the Phase I and II loop and go directly into phase III—full commercialization. Each participant was required to write a business plan and present it to a group of investors.

Drawing on what they learned in this program, the team launched Ocean Optics Inc. The first product offered by the company was the "S1000"—a portable spectrometer that could make measurements in the visible range for a fraction of the cost of a traditional spectropho-

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tometer. As sales took off, Morris hired a director of sales and marketing and a director of manufacturing to increase the company's expertise.

OOI was fortunate to have the support of a local economic development group, which provided pro bono accounting, marketing and legal assistance. The team established relationships with sales people who worked for trade journals, and sent out press announcements and self-printed flyers through direct mailing to potential customers and competitors in the spectrophotometer market. They began receiving orders immediately.

When OOI launched the S1000, the team had assumed it would be sold as an independent detector; they didn't support any add-ons to hold samples or direct light into the detector. Soon, however, they came to realize that many customers wanted to do "one-stop shopping" that would include the purchase of relevant accessories.

In order to broaden their inventory, OOI needed to have more cash available for capital purchases. Rather than looking for funding through venture capitalists, they decided to borrow \$25,000 from a few friends and family members. Sales skyrocketed, and the original investors

were rewarded with a 35 percent return on their investment. Cash-on-hand continued to be an issue as more line items were offered for different spectrometer markets. OOI sold stock in the company in a private placement to family, friends and colleagues, raising a total of \$430,000.

The new injection of funds allowed OOI to increase its workforce and its line item portfolio—to up to 1,000 products. In 1994, leaders of OOI went through the DOE commercialization program again and secured a loan with warrants from Calbert Social Ventures. Sales were still increasing every year, and OOI's financial future looked quite comfortable.

Then, in 1999, sales plateaued. After determining that OOI needed a broader reach into expanded markets, Morris prepared the company to sell stock shares to the public. The company worked with Bank of America, which loaned them money to acquire complementary companies before going public.

Phil Buchsbaum was hired to manage their first acquisition of Continental Optical, which then became Ocean Thin Films. Next, the company purchased Guided Wave. These activities increased their sales from \$9 million to \$18 million. Unfortunately, however, OOI stopped making money because they were saddled with all the loans and overhead associated with these acquisitions.

The telecom bubble had burst by 2001, and OOI decided not to go public. Once the decision was announced, Bank of America dropped OOI as a client and pulled its loan. The company did not have enough money available to pay back the loan. Morris and his colleagues did everything they could to get the cash: They sold their building, licensed some patents and sold the instrument division within Guided Wave. This was a difficult time for Morris, the company and all of his 55 investors, most of whom were family and friends.

By 2004, Ocean Optics had returned to profitability and had new financing from AmSouth Bank. The company was formulating an exit strategy for its investors. OOI hired a consulting firm,

Greenwich Technology Advisors (GTA), to prepare itself to be sold. GTA advised the company on how to prepare their marketing materials and negotiate with interested parties. Shortly afterward, Ocean Optics was sold to the Halma Group for more than \$50 million.

The sale turned out to be a blessing for OOI. It enabled the company to escape from under the thumb of loan collectors and return its focus to developing innovative solutions for their customers.

Perhaps one of the lessons that can be learned from the Ocean Optics story is that it is important to find diverse ways to grow your company beyond offerings. Companies should be careful not

to let their desire to expand overshadow their innovation goals.

All told, however, things have turned out well for OOI. Over the years, the company has grown from 5 to 130 employees. It now offers more than 1,000 line items and is approaching the sale of its 60,000<sup>th</sup> spectrometer. Most recently, OOI has been invited to the Smithsonian Museum to provide measurement instrumentation for a fluorescing experiment using the Hope and Blue Heart Diamonds. ▲

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An Ocean Optics researcher measuring the atomic emission lines of the plasma generated in a novelty plasma cylinder (or plasma ball).