

Testimony from Elastec/American Marine CEO Donnie Wilson
on “Prizes to Spur Innovation and Technology Breakthroughs”

April 9, 2014

The Committee on Science, Space and Technology, Subcommittee on Research and Technology of the
U.S. House of Representatives

Elastec/American Marine has been manufacturing oil spill response equipment for over twenty years, including oil skimmers, fire boom, containment boom and a variety of pollution control-related accessories. The mechanical drum oil skimmer is the centerpiece of our product portfolio.

Oil spills occur all over the world, on land and in water, from pipelines to refineries, rail cars, oil rigs and industry. Our simple, lightweight drum skimmer systems are successful for a variety of reasons, but one primary feature is, they are oleophilic: they attract oil and repel water. Depending upon the type of oil spilled, our drum skimmers have an average oil recovery rate (ORR) ranging up to 400 gallons per minute or 90 cubic meters per hour.

We are always searching for innovations and new technologies. Several years ago we acquired a grooved disc oil skimming technology that had the potential for higher oil recovery volume, but it sat on the shelf for several years.

On April 20, 2010, approximately 42 nautical miles offshore from Southeast Pass, Louisiana in the Gulf of Mexico, the Deepwater Horizon drilling rig exploded. It was the worst offshore oil spill in U.S. history.

The Deepwater Horizon incident prompted the X PRIZE Foundation and Wendy Schmidt to invite not just the oil recovery industry, but anyone with imagination and drive, to take on the daunting challenge to produce a system capable of recovering oil from the surface of water at a minimum rate of 2,500 gallons of oil per minute, with an oil to water efficiency of at least 70%, while being towed at 1 to 4 knots--and to do this in both calm and wave conditions. And, the top prize was one million dollars!

Elastec/American Marine entered the **Wendy Schmidt Oil Cleanup XCHALLENGE**, not for the money, but as an incentive to dust off and develop our grooved disc technology. We also entered the competition because of its global reach and for the media notoriety it could offer our company in a relatively unknown industry.

Along with 349 teams from around the world, Elastec/American Marine took up the challenge. Ten finalists from five nations tested their technologies in actual oil on water conditions at the National Oil Spill Response Research & Renewable Energy Test Facility (Ohmsett) test tank in New Jersey.

The secrecy surrounding the competitors' entries introduced additional incentive. When Elastec/American Marine first tested our grooved disc (the heart of our system), we knew we had something extraordinary. The minimum requirement in the competition was 2,500 gallons per minute, so that was not a "goal." We assumed that everyone else was aiming at 3,000, but what if those teams aspired to 3,500, or even 4,000 gallons per minute? We aimed higher.

Prior to the **Wendy Schmidt Oil Cleanup XCHALLENGE**, if you were to bring up those figures in relation to skimming possibilities, you would have been dismissed as a dreamer. But the incentive of winning \$1 million and the fame that comes with winning one of the X PRIZE Foundation's competitions now seemed within reach. **And Team Elastec won!**

Our skimmer system delivered an astonishing oil recovery rate of 4,670 gallons per minute at a nearly 90% efficiency ratio of oil to water. In just six months the X PRIZE Foundation had become the catalyst to advance the efficiencies of oil spill recovery more than in the previous twenty years.

The **Wendy Schmidt Oil Cleanup XCHALLENGE** brought together teams that have been in the industry for some time--and some with fresh new ideas. Elastec/American Marine has been in communication with some of those teams

and has shared technologies and ideas to enhance each other's systems.

Competitive collaboration: another plus for incentive-based competitions.

And, we began to get noticed. Our skimmer system was honored by National Geographic and The Washington Post as among the best innovations in 2011. We won several international awards, including Popular Mechanics 2012 Breakthrough Technology Award, Offshore Arabia's prestigious Excellence in Environmental Applications Award and the Nafta Gaz Grand Prix Award at Oil & Gas Warsaw in Poland.

It is hard to describe all of the benefits Elastec/American Marine has experienced because of our winning the **Wendy Schmidt Oil Cleanup XCHALLENGE**, primarily because that book has not been completed. But new chapters are being written.

Had it not been for the **Wendy Schmidt Oil Cleanup XCHALLENGE**, we may not have developed the grooved disc skimming technology. And, had we developed the technology, it could have taken us a decade to do so.

For a company our size, we cannot afford to take too many uncalculated financial risks. However, winning the competition has helped us "prove" the grooved disc technology and in a relatively short time. We are currently in the process of developing a commercial line of X SKIMMER models that can operate in advancing or stationary modes.

To date, Elastec/American Marine has begun to sell several custom-built X SKIMMER models for use in the waters of three continents, and an X SKIMMER Offshore Launching System will be introduced at the International Oil Spill Conference in Savannah, Georgia next month.

This competition gave Elastec/American Marine the faith and the financial incentive to develop a new technology to keep our world clean.