



Bill Stone

Space Cowboy

Engineer and daredevil explorer Bill Stone is obsessed with discovery. After years of descending into the deepest unexplored caves on the planet, he's building robots to go where he can't and planning the next move in private space ventures.

One of the world's most renowned deep cave and submerged cave experts, Stone has participated in over 60 international expeditions. He is a co-author of *Beyond the Deep: The Deadly Descent into the World's Most Treacherous Cave*, based on his explorations of the Sistema Huautla cave in Mexico.

He also achieved fame within the diving community when he demonstrated the Cis-Lunar MK1 rebreather in Florida in a scuba dive that lasted a staggering 24 hours. But, Stone's missions are to prove that caves are the best earthly training for exploring space.

Stone's Texas-based company, Stone Aerospace, built DEPTHX, an autonomous robot which descended 1,099 feet down Mexico's deepest unexplored hydrothermal sinkhole. In 2009, he and his team completed a successful mission to Antarctica with the next-generation ENDURANCE robot. The NASA and National Science Foundation-sponsored expedition was developed to explore and map under the ice of Lake Bonney near the South Pole. But Stone's real mission, chronicled in National Geographic's documentary "*Journey to an Alien Moon*": is to build a probe with NASA to bore through miles of ice on Jupiter's moon *Europa*, then swim through the buried European sea in search of alien life.

He's also hoping to singlehandedly jump-start commercial space exploration by offering spacefarers affordable fuels and consumables extracted from Earth's moon. The moon harbors vast reserves of hydrogen necessary for rocket fuel. Stone wants to add the missing piece that could support a booming lunar economy—an outpost to mine hydrogen from icy deposits in the moon's polar craters.

Because fuel accounts for the vast amount of weight—and hence cost—of existing space-bound rockets, a source for fuel beyond Earth's gravity would slash the cost of space travel tremendously.

Stone's new Shackleton Energy Company intends to raise \$15 billion—the price of a North Sea oil production platform complex—to mine ice thought to be trapped on the moon's southern pole at Shackleton Crater, and to sell derived products on the moon and in Low Earth Orbit to international consumers. If all goes well, Stone hopes the business could begin commercial sale of fuel and water in Low Earth Orbit as early as 2017 as an international energy company. His rationale is clear—space will be explored commercially, not through government conquest. As the U.S. pulls back from human space exploration, entrepreneurs will fill the void.

According to *Wired Magazine*, "Stone is the archetypal modern-day explorer, a multidisciplinary maverick constantly inventing tools in the name of discovery lust."