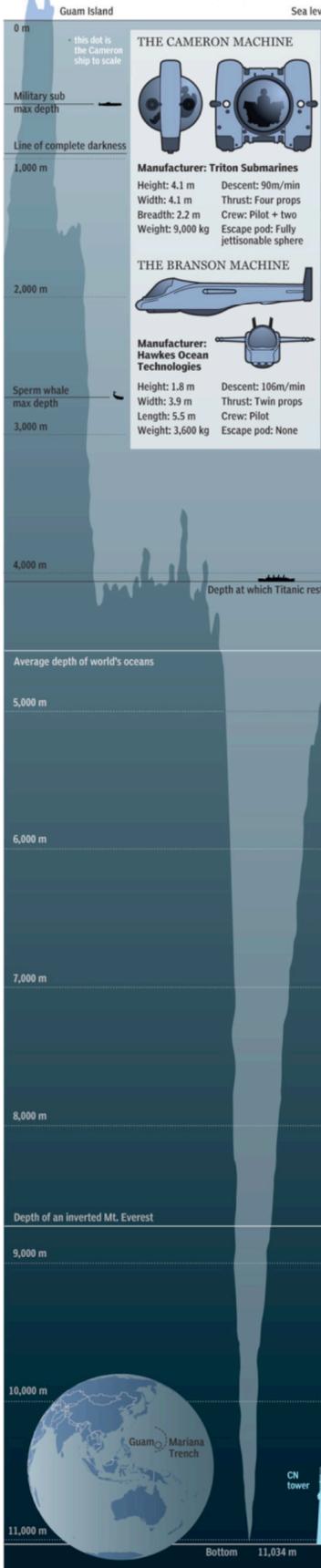


The Mariana Trench – pitch black, icy cold, and with crushing pressures. Only two explorers have made the 11km journey down to the Pacific Ocean's deepest point. But a new wave of explorers is gearing up to repeat this remarkable dive. Here is a look at the top two unlikely competitors and the challenge they face.



Race to the Marian Trench --- Cameron, Branson, Google, & Triton

Film director James Cameron leads submarine race to the bottom of the Mariana Trench
 By Jacqui Goddard in Vero Beach

Don Walsh & Jaques Piccard in front of the Trieste 1/23/63
www.navsource.org



It is the lowest point in the world's oceans and one of the most forbidding spots on the planet, cloaked in cold, darkness and enduring mystery. Inhabited by organisms that resemble some of the earliest life-forms, it is deeper than Mount Everest is tall, with access so risky and complex that it has had just two human visitors since its formation nine million years ago. Now, in what could be the culmination of a so-called "race to inner space", Hollywood director James Cameron may be poised to dash the hopes of Sir Richard Branson's Virgin Oceanic team of being the first 21st-century aquanaut to reach Challenger Deep, the nethermost location in any of the world's oceans. America's civil submarine construction community is abuzz with word that the 57-year-old Canadian film-maker is preparing to make a treacherous solo descent of the nearly 36,000ft deep abyss, located in the Pacific Ocean's Mariana Trench, within weeks.

Curling his 6ft 1in frame inside a cramped submersible built to withstand the crushing water pressure of 16,000 pounds per square inch – equivalent to 8,000 elephants standing on a Mini Cooper – his attempt will, if successful, hand him a record that Virgin's pilot Chris Welsh had originally aimed to conquer by the end of last year. Mr. Cameron's team members are sworn to public secrecy and his office refused to comment.

But his vessel and ambitions are considered credible by experts including retired US Navy Captain Don Walsh, one of the two-man crew who emerged from the earth's floor as heroes after their nerve-racking voyage to Challenger Deep aboard the bathyscaphe Trieste in 1960. He has given the mission – and the man he dubs "Cousteau on steroids" – his blessing. "Jim is a remarkable guy who's never trained as an engineer but has an intuitive grasp of engineering details that far surpass a lot of the professionals I've known," Capt Walsh, 80, told The Sunday Telegraph. "He hasn't wasted a lot of time trumpeting to the world, 'We're going to do this.' He wants to make sure he's got it right and then he'll tell the world. He's a pretty high profile person and he doesn't want to screw up royally." He added: "More men have gone to the Moon than to the deepest point on Earth. They went with rockets and fire up their a**es and walked around in funny suits planting flags. With diving, you just disappear quietly into the depths and hope you come back up."

Mr. Cameron is a self-described "science junkie" whose passion for ocean exploration inspired him to make the epic 1997 feature film Titanic, the 2003 underwater documentary Ghosts of the Abyss, and in 2005 Aliens of the Deep, in which he joined NASA scientists investigating submerged mountain ranges in the Pacific and Atlantic. Losing pressure in the passenger compartment would cause his battery-powered vessel to implode. Even the tiniest leak would send a jet of water rushing in at such high-pressure that it would slice the craft in half. "There have been white-knuckle moments, complete power failures where we've had to use emergency ballast systems to get back," he admitted in an interview with Popular Mechanics magazine last year, adding: "Yeah, your life is at risk any time you go into a hostile environment like that - but you trust the engineering." He has passed thousands of hours beneath the waves and has spent recent weeks making final preparations in Australia, including testing documentary cameras in Sydney Harbour.

Two other outfits have declared an intention to reach Challenger Deep, though not in the immediate future, and Mr Branson is the only party to have characterized the quest in competitive terms, stating when he unveiled the Virgin Oceanic bid last April that Mr Welsh aimed to pilot the first solo expedition there as part of a plan to dive to the deepest points in the world's five oceans. Despite the outward signs of competition, Mr. Cameron and Virgin Oceanic's teams – along with Triton Submarines and DOER, two other developers who have their sights on the Mariana Trench in the longer-term – have assisted one another's progress.

"Of course there's some desire behind each individual to be first but the nice thing about working with Cameron is that we get to share some of the technology together," said Eddie Kisfaludy, Virgin Oceanic's operations manager. "Though the media has portrayed it as a race, it's also been a nice collaboration to share technologies and learn from each other." The company concedes that

necessary design modifications have slowed the pace of the Virgin bid. Mr. Kisfaudy declined to specify when Virgin's vessel will be ready, but said that development of their craft was "moving on nicely", with its first trials in shallow water completed successfully. He referred further enquiries to Mr Welsh, who did not respond to requests for comment.

But Bruce Jones, chief executive of Triton Submarines, gave his own take on progress. "Jim Cameron is going to be the first to get there," he said. "We don't believe the Branson/Welsh project has legs; we think there's just one too many technical problems." Located in an industrial unit in Vero Beach, Florida, Triton is working on developing larger submersibles that will open up the Mariana Trench, not just to billionaire swashbucklers but to new generations of explorers, scientists and \$250,000-a-ticket deep-sea tourists. "We don't want something where we just go to the bottom and shout 'Woo-hoo!' and then put it in a museum like Cameron," said Triton's vice-president Marc Deppe, sitting in the giant glass sphere that forms the centerpiece of its submersible design. "We hope we're wrong about Branson, we hope they get to the point of being able to make a successful dive. "We want to bring the ocean to the world in an inspiring and sustained way that will make kids go 'Wow, I want to be an explorer, I want to know more about the ocean.'"

It was on January 23 1960 that Capt Walsh and crewmate Jacques Piccard set the ultimate deep-diving record, setting down their bathyscaphe – a 50ft craft resembling a submarine but operated by a crude manual system of weights and floats – at the lowest spot in the Mariana Trench. Their journey challenged theories that life could not exist at such depth, after they reported seeing fish and other organisms on the sea bed, and refreshed scientific curiosity in the unique environment of the deep ocean. Yet 52 years later, it – and much of the world's other deep ocean environments – remain an enigma. "Less than two per cent of the oceans have been explored and yet what could be down there? Maybe cures to degenerative diseases, maybe answers to the world's food problems," said Mr Deppe. "People fall in love with the adventure and the mystery of the ocean and that's what we want to give them."

Triton is developing what it believes will prove the only multi-passenger submarine capable of plunging the seven miles to Challenger Deep. DOER Marine – a marine consulting firm founded by oceanographer and environmentalist Dr Sylvia Earle and backed by Google's executive chairman, Eric Schmidt – is meanwhile working on new materials, technologies and vehicles that will better equip scientists for observing deep environments including the Mariana Trench, and assessing their health in the face of man-made threats. "From a scientific perspective, there is a sense of urgency because of the increasing pressures upon the oceans – our collective life support system," said DOER's president, Liz Taylor. "Our hope is that the efforts of the 'deep sea racers' will serve a greater good by way of inspiring people to stop and think of the oceans and their importance in providing us all with a hospitable planet. In many places the oceans are treated only as a supermarket or a sewer and in some cases both. We need instead to think of the oceans as the big blue bank account."

<http://www.treasurecoast.com/index.cfm/news/the-great-outdoors/film-director-james-cameron-leads-submarine-race-to-the-bottom-of-the-mariana-trench/> February 26, 2012

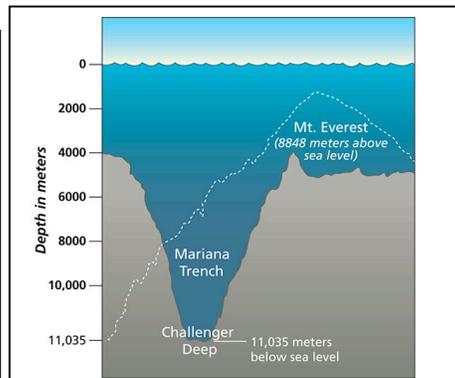


A Sub

<http://www.webpronews.com/james-cameron-leads-race-into-mariana-trench-2012-03>



Branson's Sub guardian.co.uk



tourismplacesworld.blogspot.co

Mariana Trench

TRITON
Is a ride in this yellow submarine worth \$250,000 a seat?

DOER
What can this Google-backed sub do for scientists?

VIRGIN
Can this one-man mission break a record in five oceans?

JAMES CAMERON
Will the Avatar director find a sequel in the deep?

Challenger Deep, Mariana Trench
The ocean's deepest point 10,994m down

Sea level, 0m

From <http://www.bbc.co.uk/news/science-environment-17041435> Trieste Photo: navsource.org ----->

A historic dive revisited

Fifty years ago, a two-person crew from San Diego reached the bottom of Challenger Deep, a section of the Mariana Trench nearly 7 miles deep. The dive was made possible by a bathyscaphe, a deep-sea submersible, named the Trieste.



35,797 feet
Distance Trieste descended into Challenger Deep

35,000

29,028 feet
Mount Everest

25,000

20,000

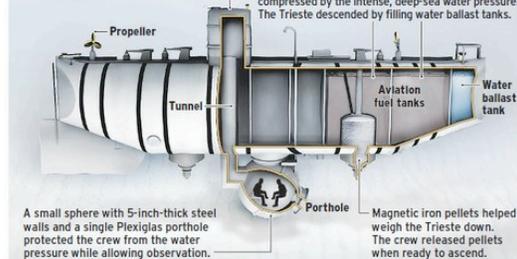
15,000

10,000

5,000

2,717 feet
Burj Khalifa, world's tallest building

A LOOK AT THE TRIESTE



SOURCE: U.S. Navy

AARON STECKELBERG / Union-Tribune