



The Titan Submersible Tragedy

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Credit: The Telegraph

ATLANTIC/MAGELLAN



Credit:<https://www.youtube.com/watch?v=YqE9yfJDo1o>

Guillermo
Söhnlein



Stockton
Rush

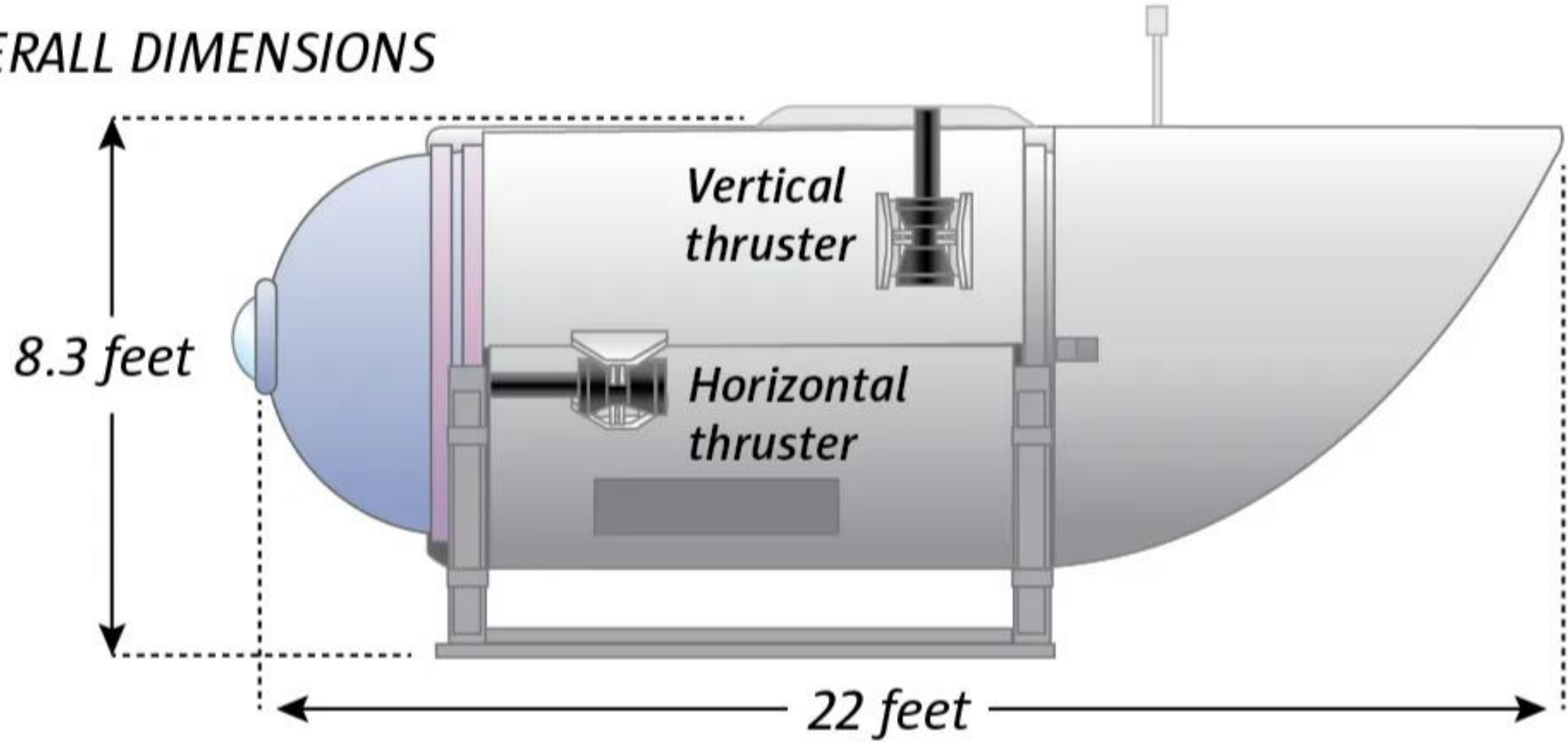


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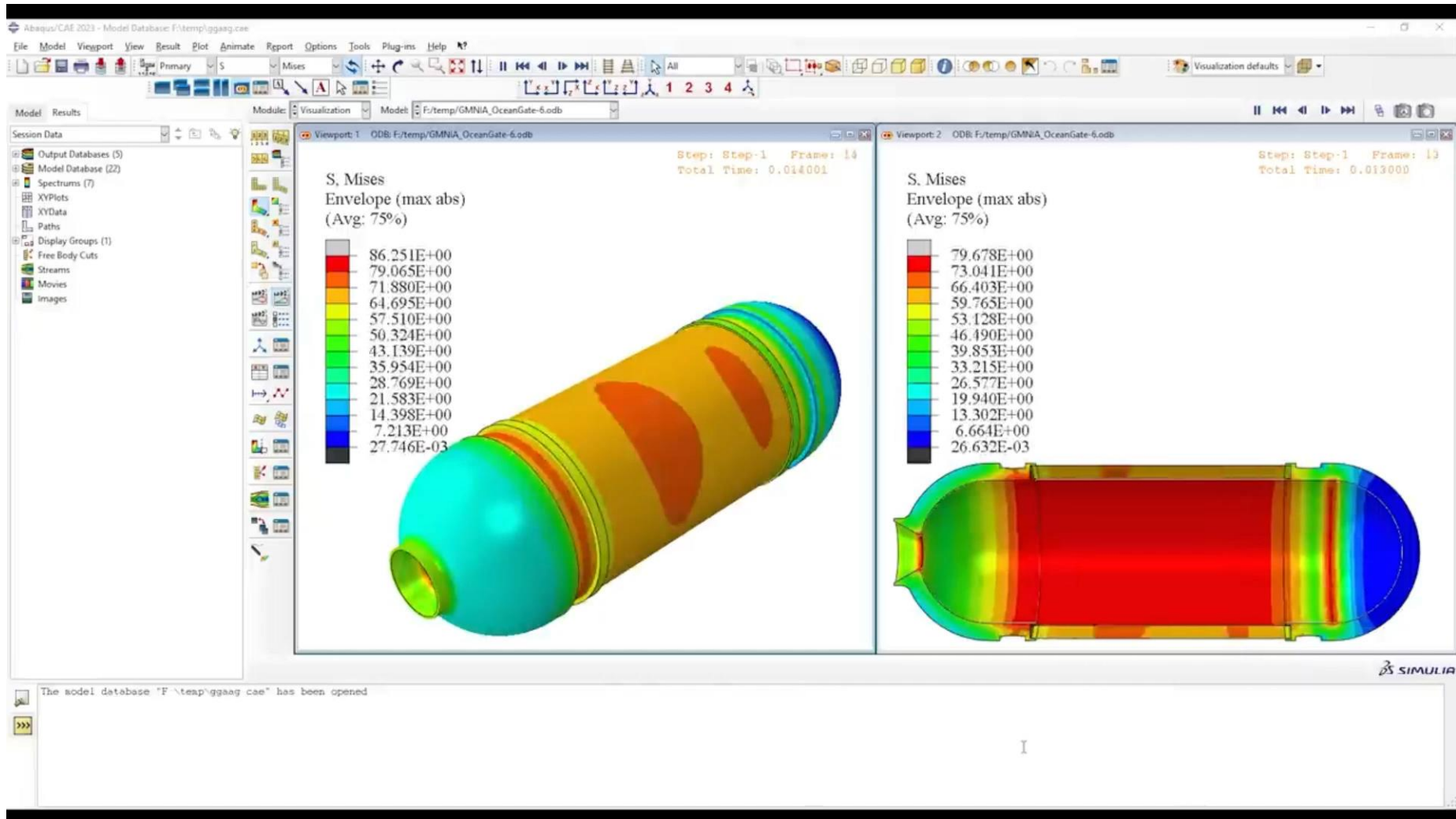


OVERALL DIMENSIONS



Credit: OceanGate

Simulation



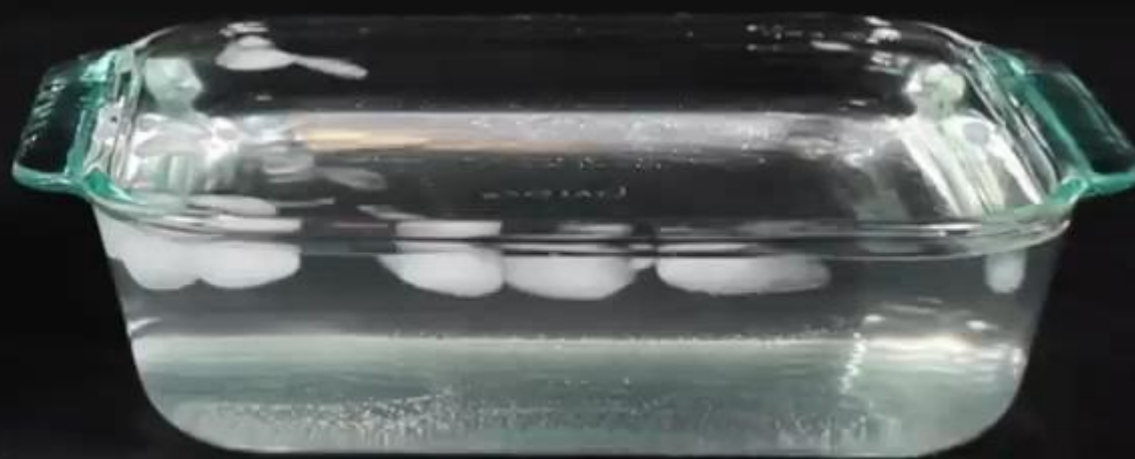
HOW IT



IMPLODED

How Materials Contributed to the Failure

- Exact cause of the implosion is unknown
- Simulations have theorized 3 failure modes
- Fracture of the acrylic window at roughly 50 MPa
 - Due to low ductility of acrylic
- Fracture of the carbon fiber cylinder
 - Damaged by the acrylic window fracture
 - Buckling pressure of CFRP is 43 MPa
- Adhesive failure between hull and endcaps
 - Due to high stress between the titanium and CFRP. The adhesive fails



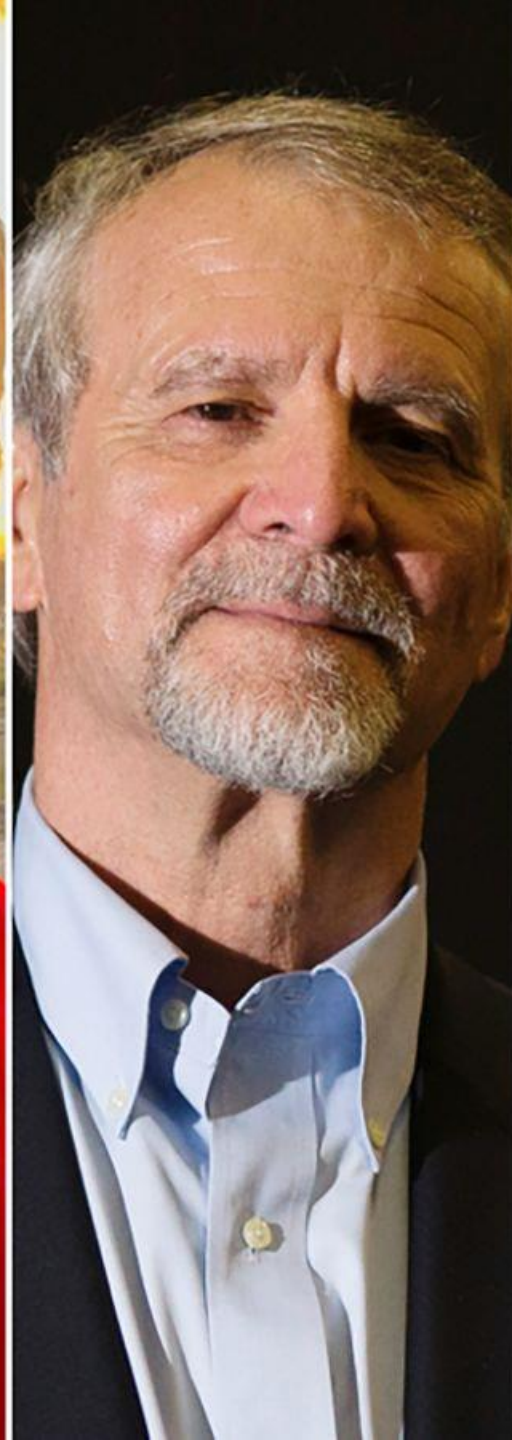
Societal Impact

- Five fatalities sparked public outrage towards extreme engineering endeavors and lack of safety protocols
- Public debate about using taxpayers' money for lengthy and expensive search and rescue for the wealthy
- Economic – OceanGate and businesses of investors on board were negatively impacted
- Environmental – additional pollution from wreckage

ATLANTIC/MAGELLAN



Credit:<https://www.youtube.com/watch?v=YqE9yfJDo1o>



NEWFOUNDLAND, CANADA

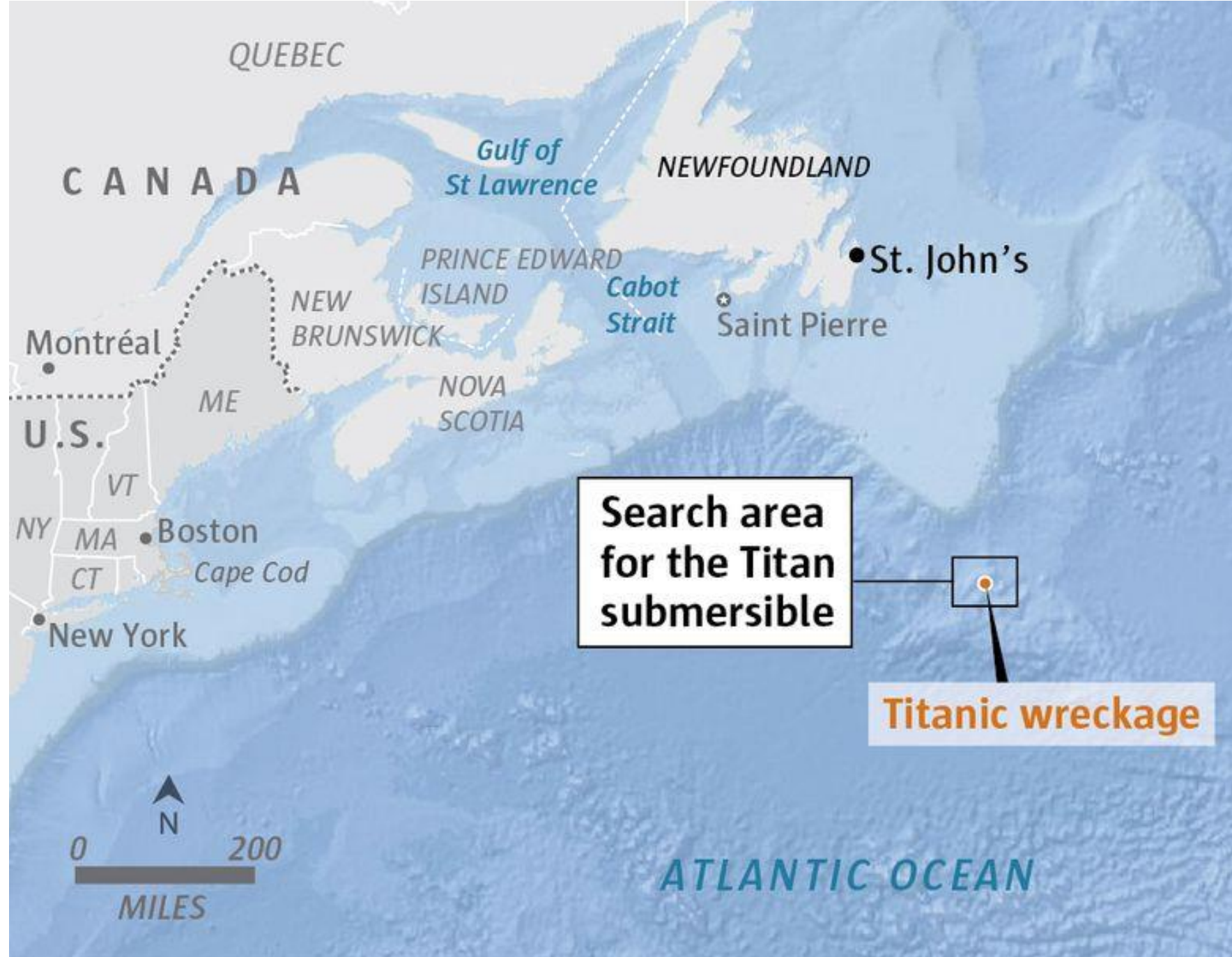


BREAKING NEWS

CBS EVENING NEWS
WITH NORAH O'DONNELL

PRESUMED HUMAN REMAINS FOUND IN TITAN SUB WRECKAGE

Credit: <https://youtu.be/7rgOZQ8wrRM>



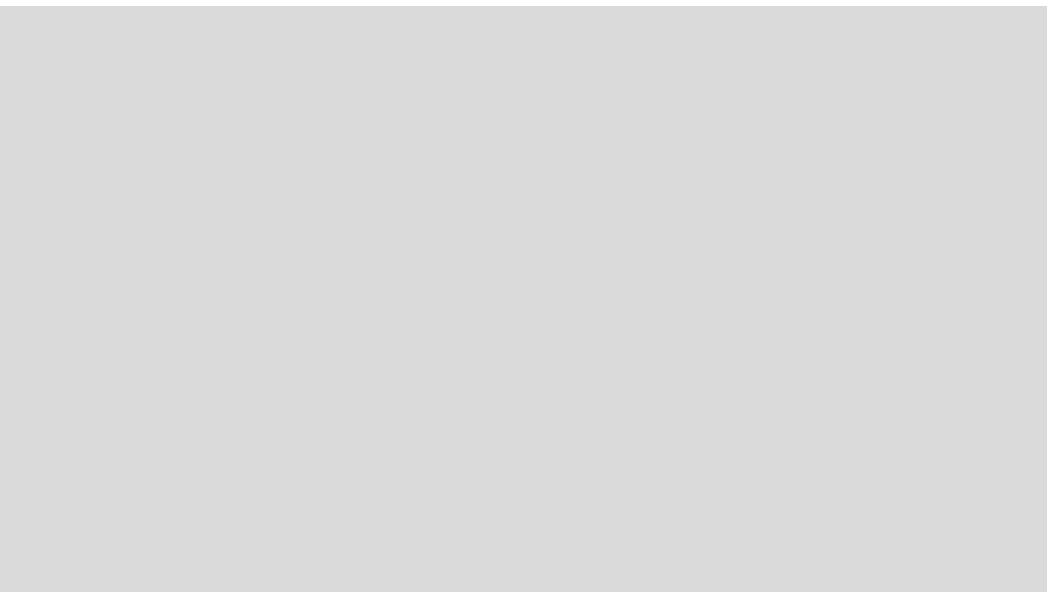
Source: Esri

MARK NOWLIN / THE SEATTLE TIMES

DEBRIS FIELD
1,600 FEET
OFF THE BOW OF
THE TITANIC WRECK



CREDIT: OCEANGATE EXPEDITIONS











References

All images via Google Images (stock photos)

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