

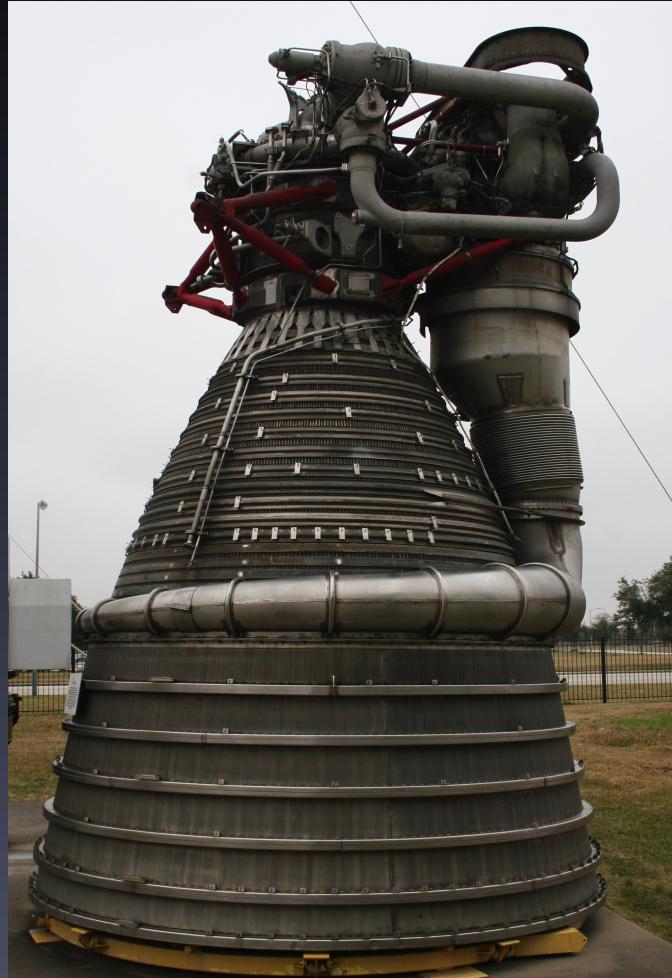
Geographies of the Missing and Lost

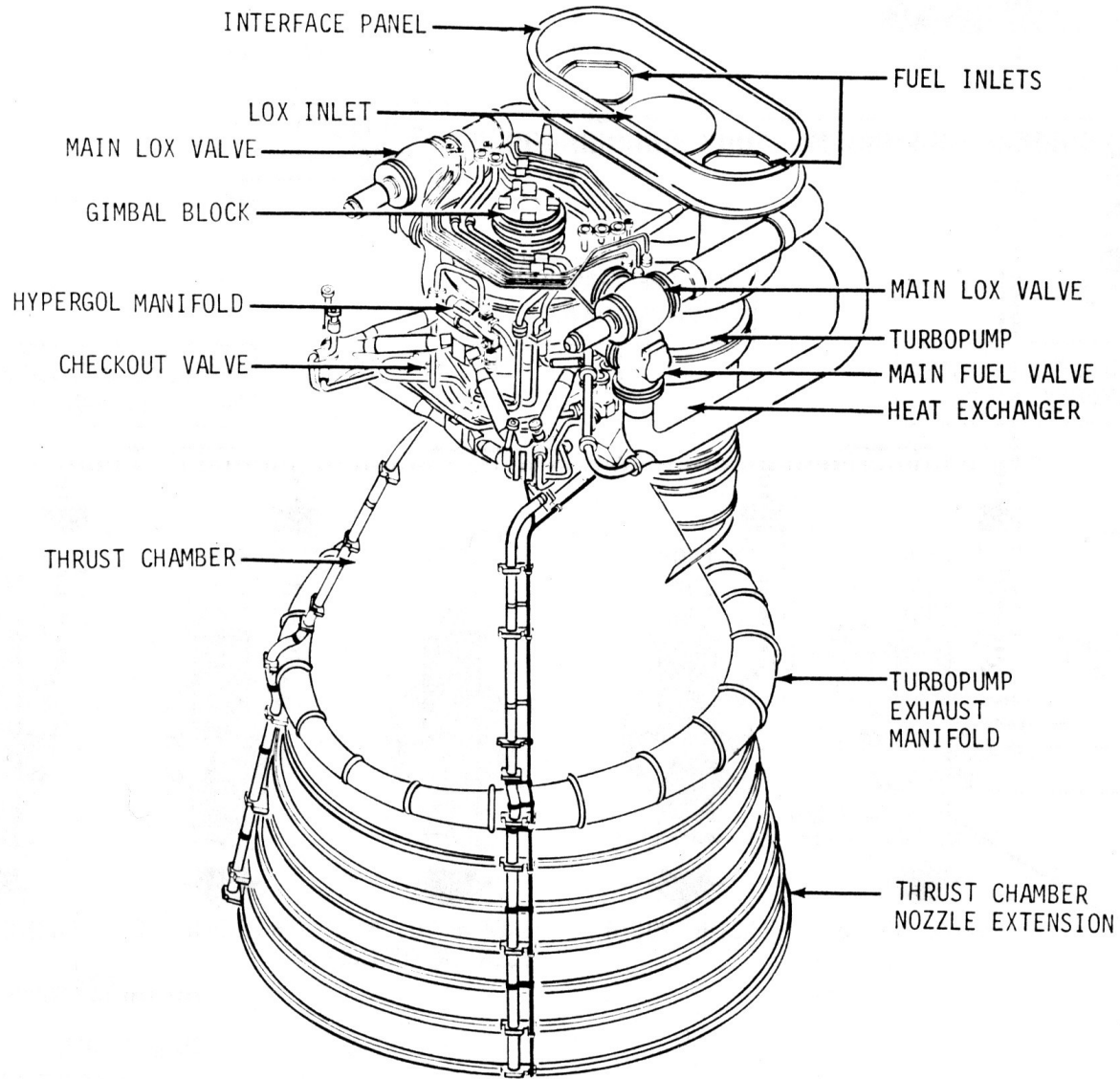
Search and Recovery of the F-1 Engines from Apollo 11

David Concannon
Explorer Consulting

Presented at
The Royal Geographical Society
28 August 2019

What is an F-1 Engine?

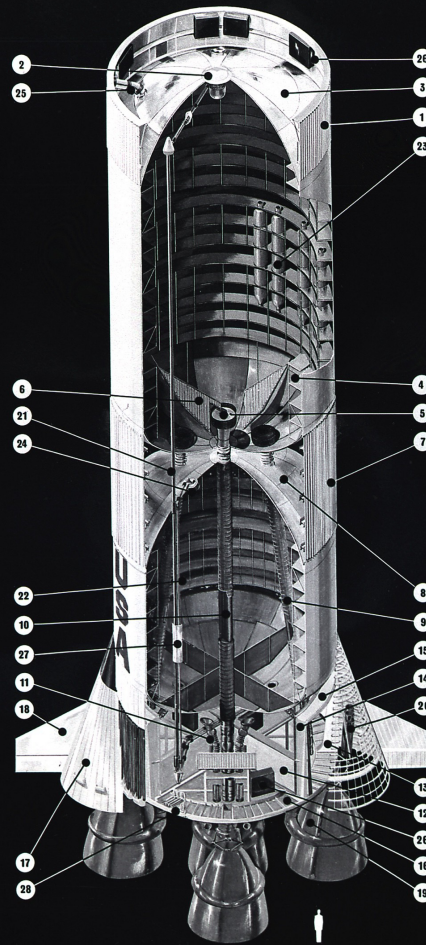






Where do you look for an Apollo rocket?

“We’re NASA. We think of everything.”

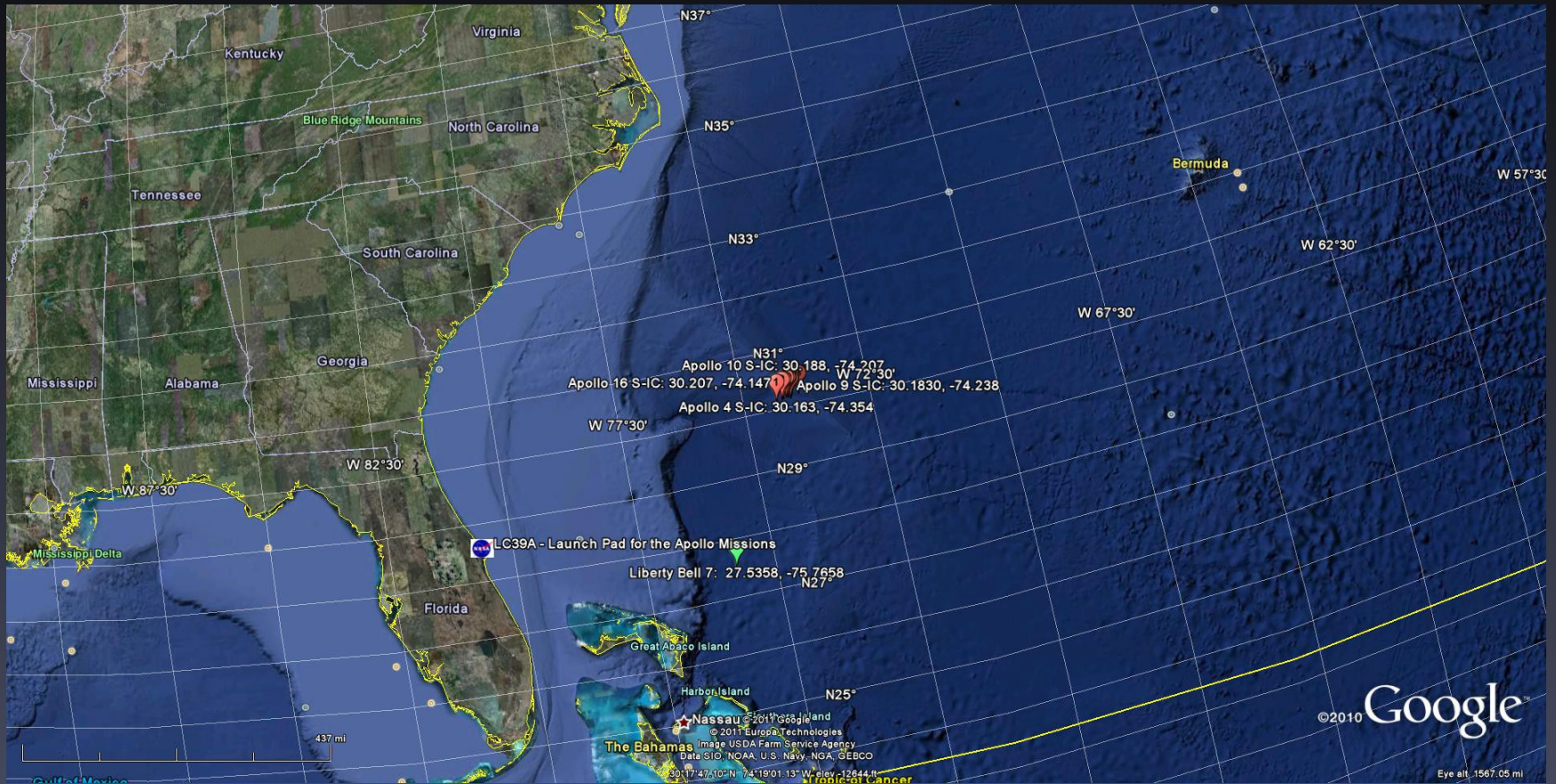


- | | | |
|---------------------------|--------------------------|---------------------------|
| 1 FORWARD SKIRT STRUCTURE | 11 FUEL SUCTION LINES | 21 GOX LINE |
| 2 GOX DISTRIBUTOR | 12 CENTER ENGINE SUPPORT | 22 HELIUM LINE |
| 3 OXIDIZER TANK | 13 THRUST COLUMN | 23 HELIUM BOTTLES |
| 4 ANTI-SLOSH BAFFLES | 14 HOLD DOWN POST | 24 HELIUM DISTRIBUTOR |
| 5 ANTI-VORTEX DEVICE | 15 UPPER THRUST RING | 25 OXIDIZER VENT LINE |
| 6 CRUCIFORM BAFFLE | 16 LOWER THRUST RING | 26 INSTRUMENTATION PANELS |
| 7 INTERTANK STRUCTURE | 17 ENGINE FAIRING | 27 CABLE TUNNEL |
| 8 FUEL TANK | 18 FIN | 28 UMBILICAL PANEL |
| 9 SUCTION LINE TUNNELS | 19 F-1 ENGINE | |
| 10 OXIDIZER SUCTION LINES | 20 RETRO ROCKETS | |

S-1C STAGE SATURN V LAUNCH VEHICLE

THE **BOEING** COMPANY AERO-SPACE DIVISION SATURN BOOSTER BRANCH

Things you find on Wikipedia...



Ruler

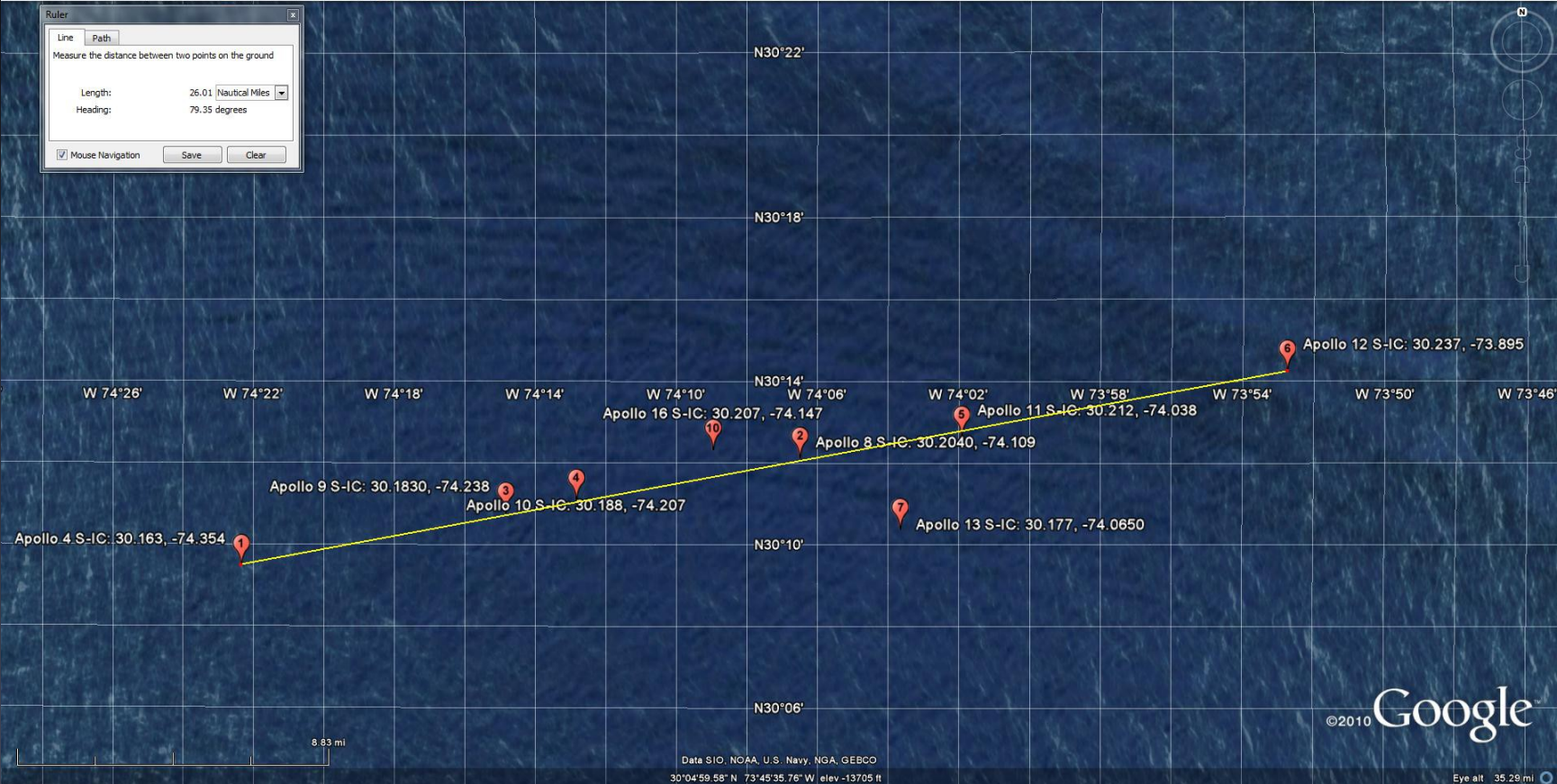
Line Path

Measure the distance between two points on the ground

Length: 26.01 Nautical Miles

Heading: 79.35 degrees

Mouse Navigation Save Clear



“It’s deeper and smaller than what?”

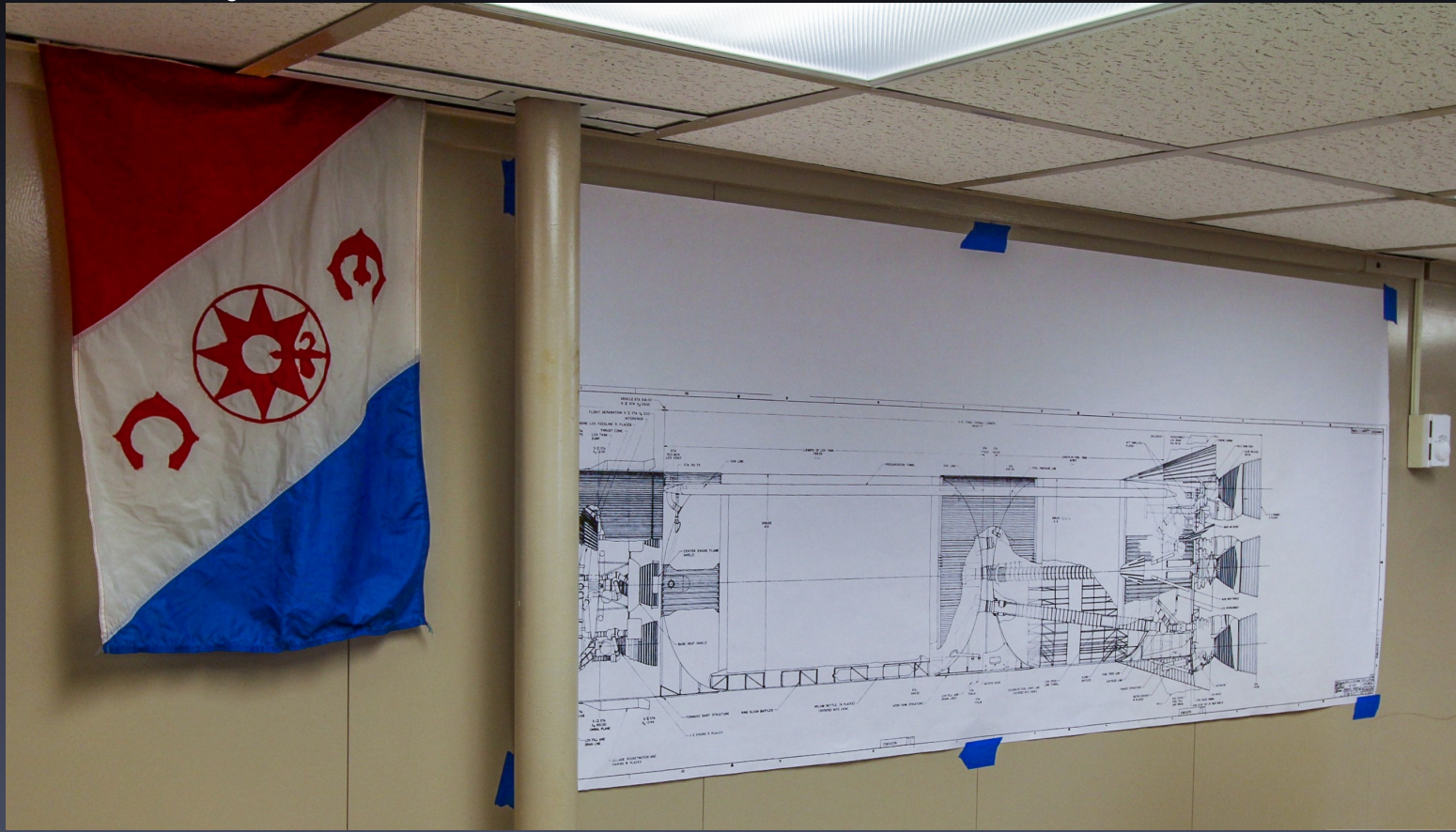
What could possibly go wrong, Part 1?

The 2011 Atlantic Hurricane Season

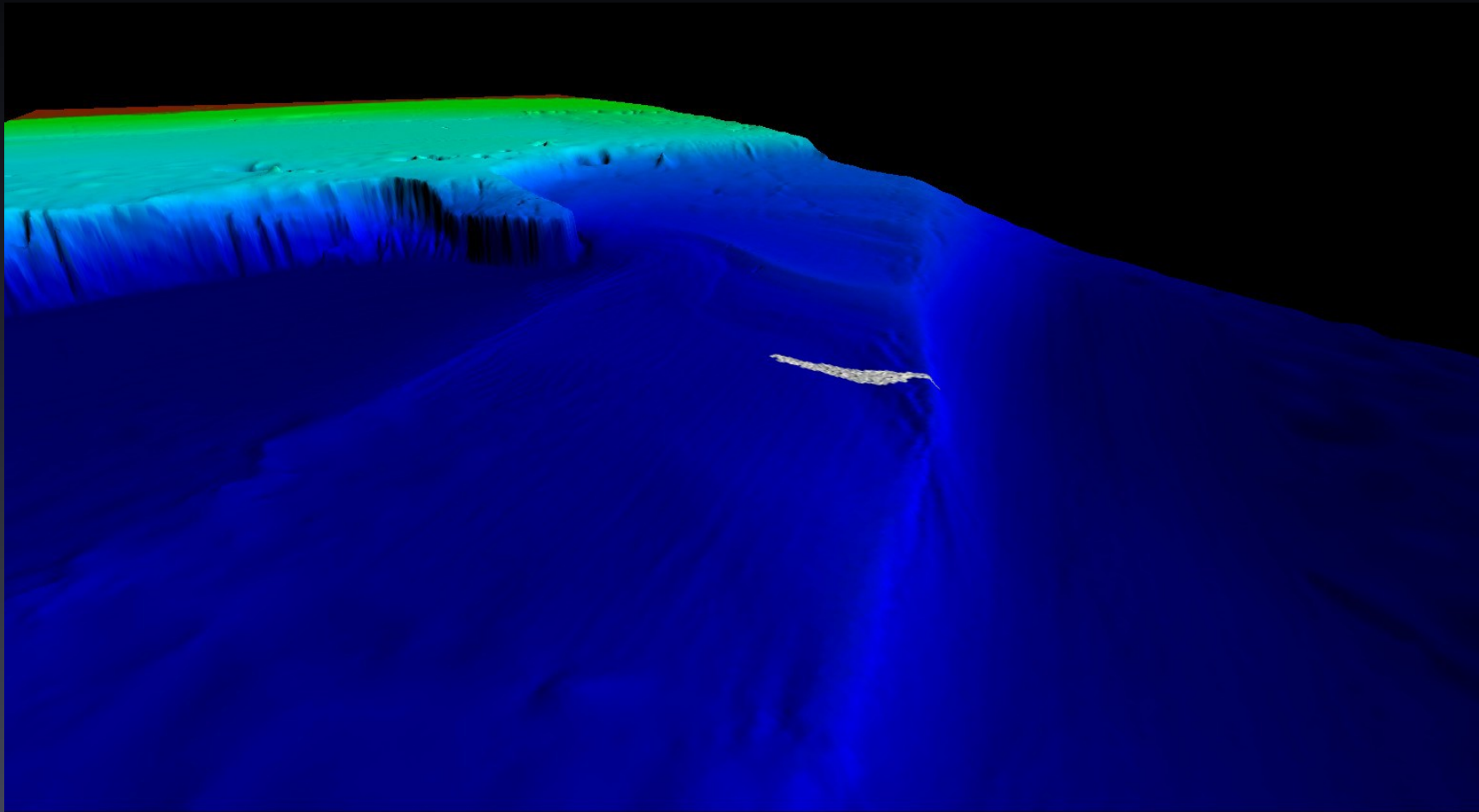
“We have the technology...”
Actually, we don't. So let's build it.

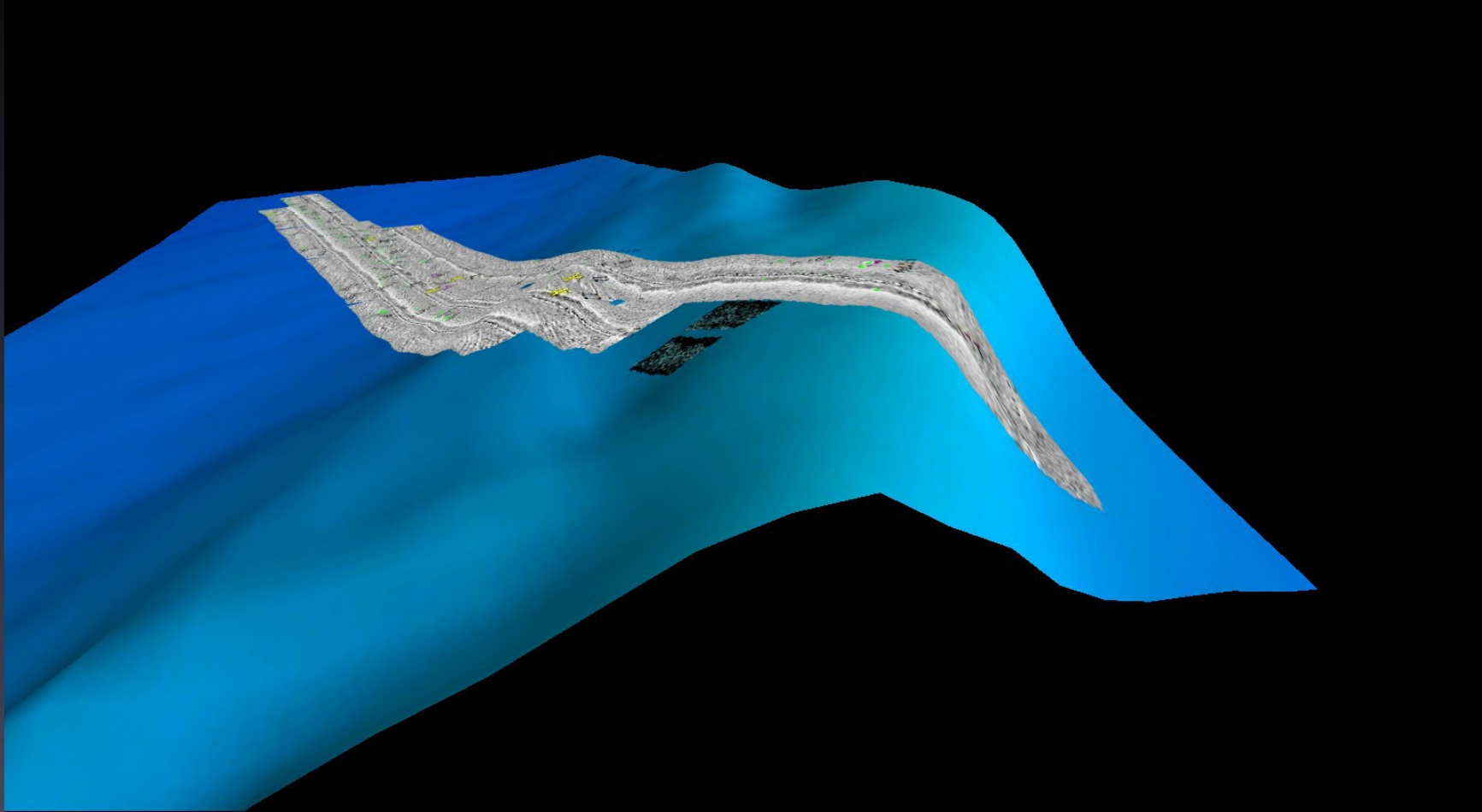
“We have a ship...”
Actually, we don't, so let's refit one.

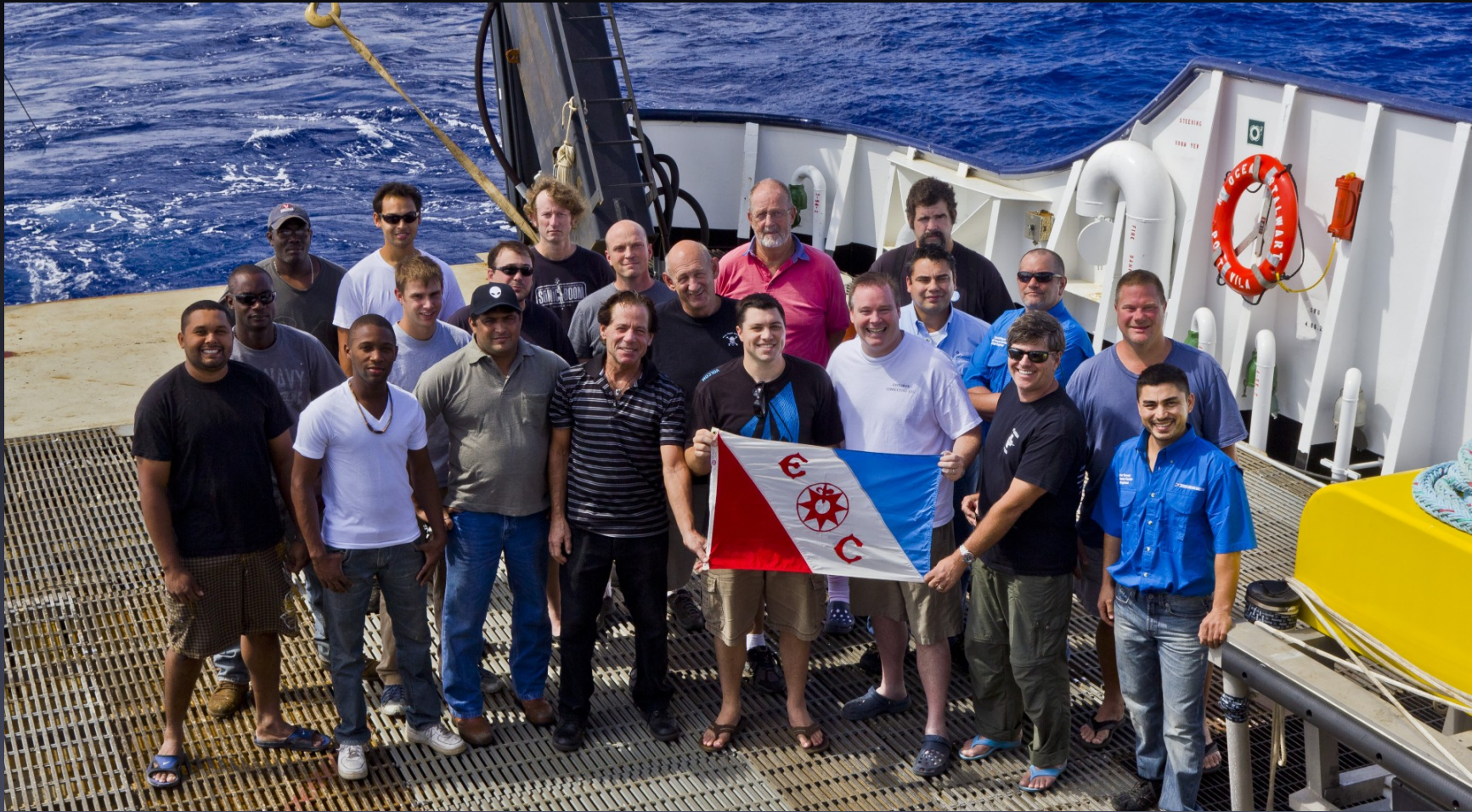
“We have a crack team of professionals who know what we’re looking for...”
Actually, we don’t, because I have not told them.



“We know where we’re going...”
Actually, ...







March 28, 2012 – BezosExpeditions.com

I'm excited to report that, using state-of-the-art deep sea sonar, the team has found the Apollo 11 engines lying 14,000 feet below the surface, and we're making plans to attempt to raise one or more of them from the ocean floor. We don't know yet what condition these engines might be in - they hit the ocean at high velocity and have been in salt water for more than 40 years. On the other hand, they're made of tough stuff, so we'll see.

Though they've been on the ocean floor for a long time, the engines remain the property of NASA. If we are able to recover one of these F-1 engines that started mankind on its first journey to another heavenly body, I imagine that NASA would decide to make it available to the Smithsonian for all to see. If we're able to raise more than one engine, I've asked NASA if they would consider making it available to the excellent Museum of Flight here in Seattle. (For clarity, I'll point out that no public funding will be used to attempt to raise the engines, as it's being undertaken privately.)

NASA is one of the few institutions I know that can inspire five-year-olds. It sure inspired me, and with this endeavor, maybe we can inspire a few more youth to invent and explore.

We'll keep you posted.

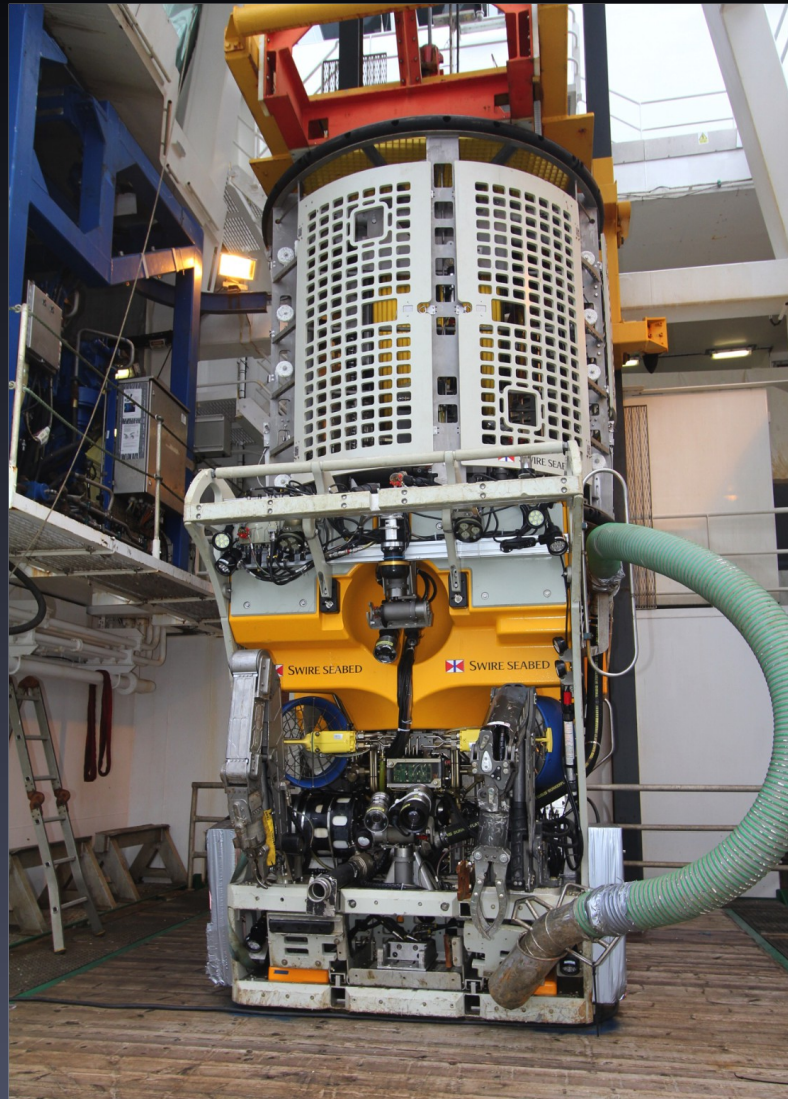
Sincerely,

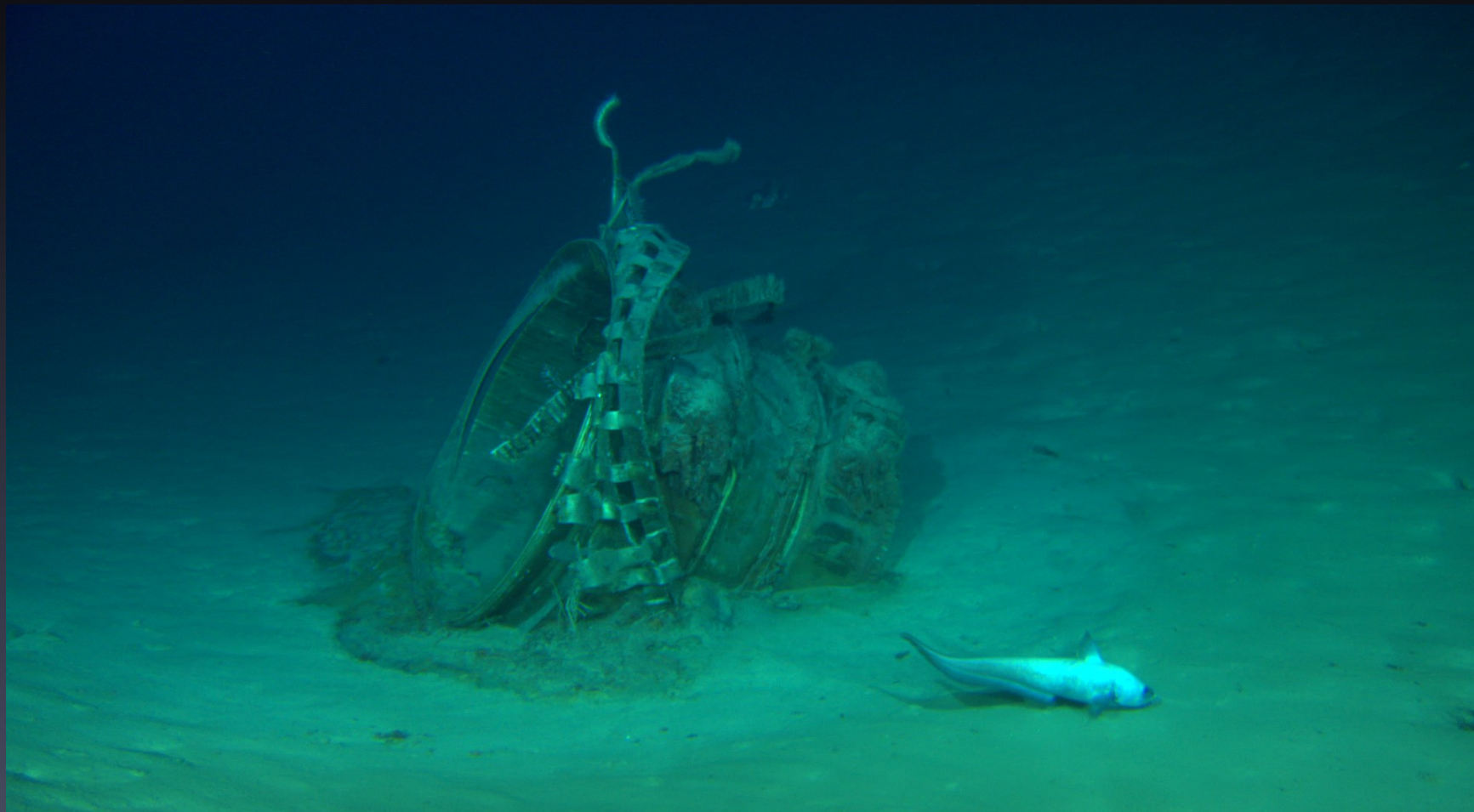
Jeff Bezos

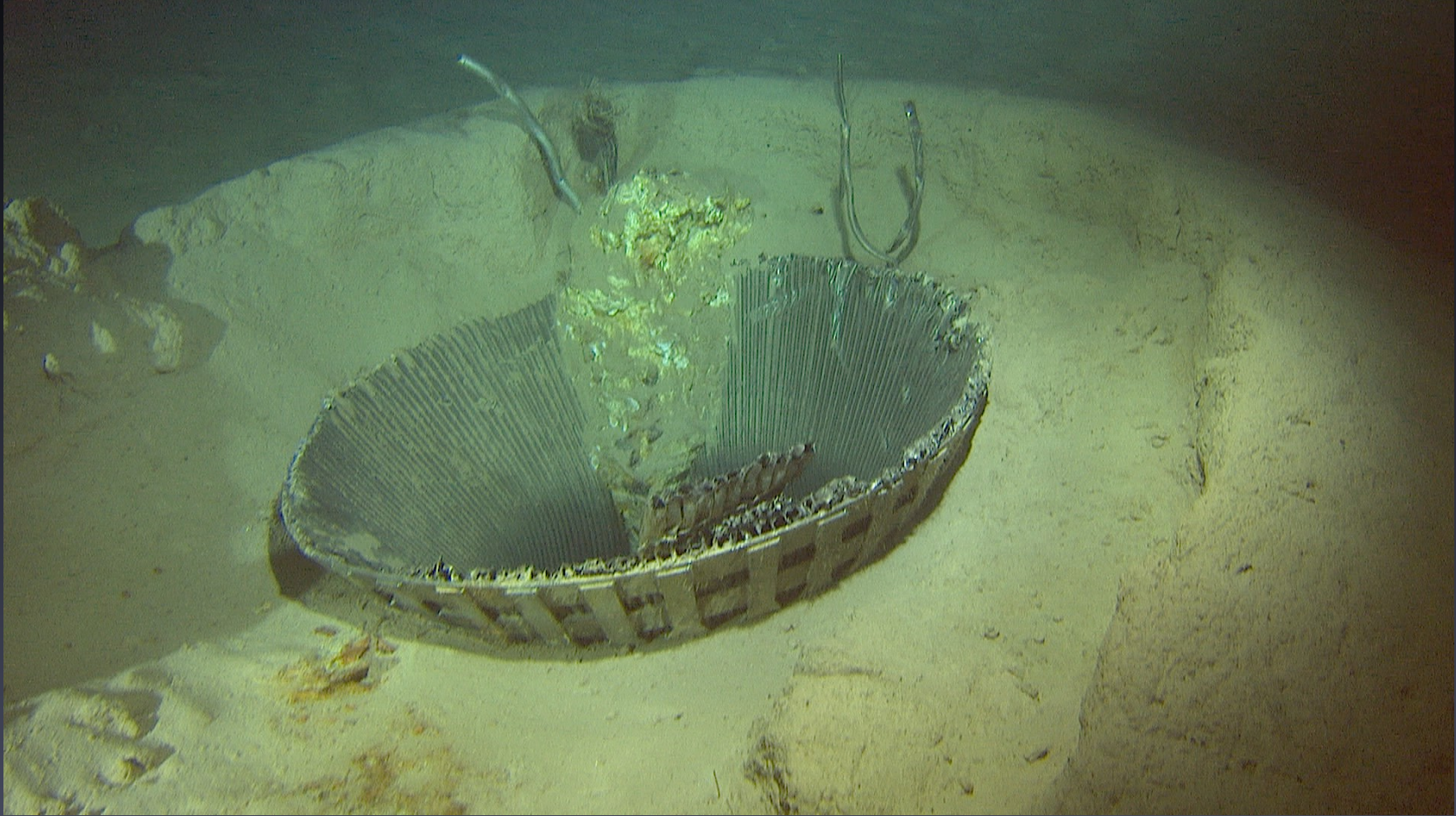
“We need a bigger boat...”

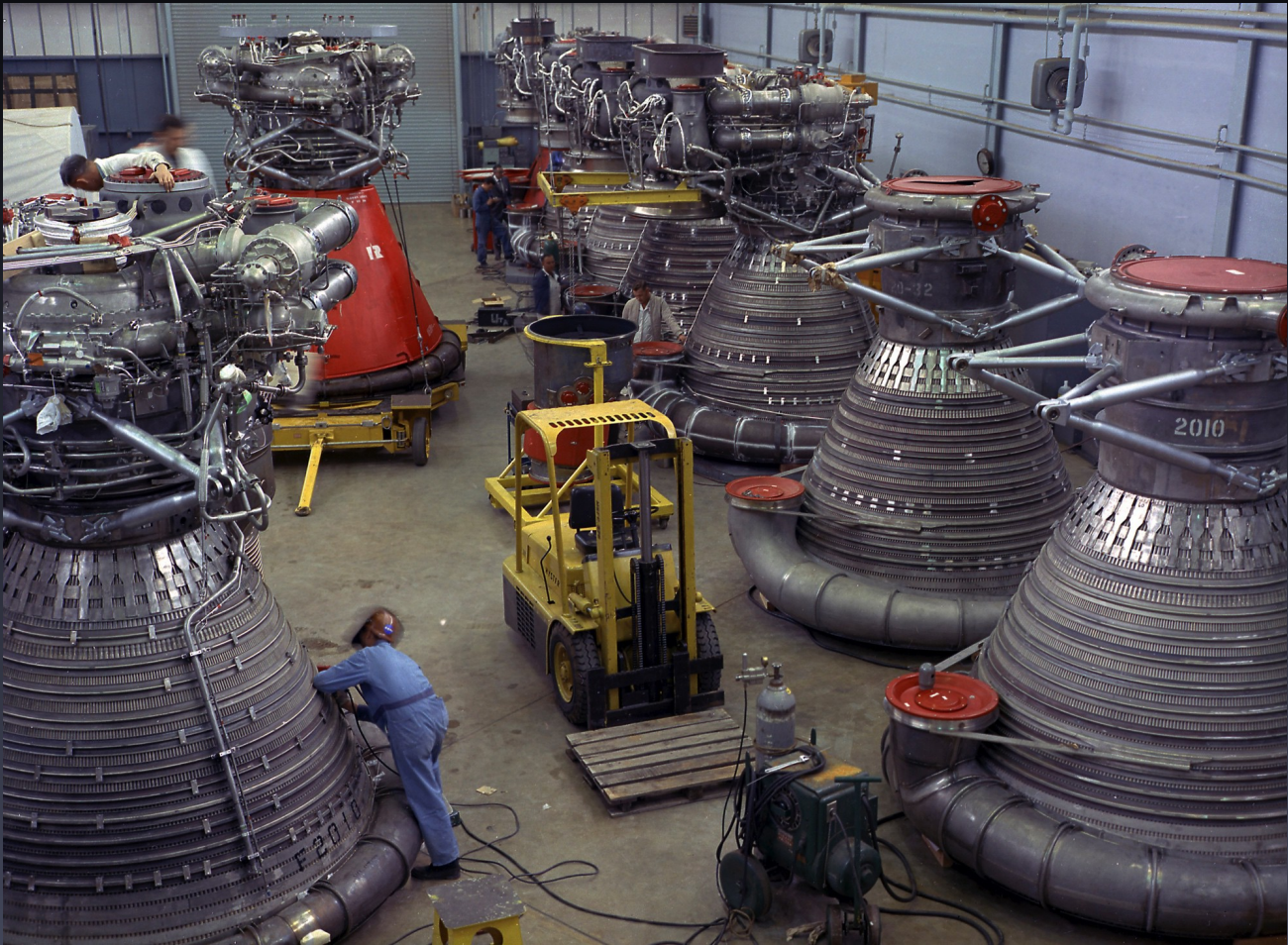


“We need new deep sea technology...”



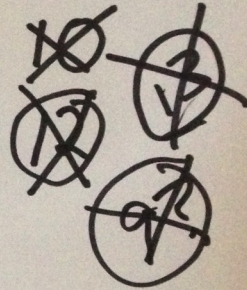




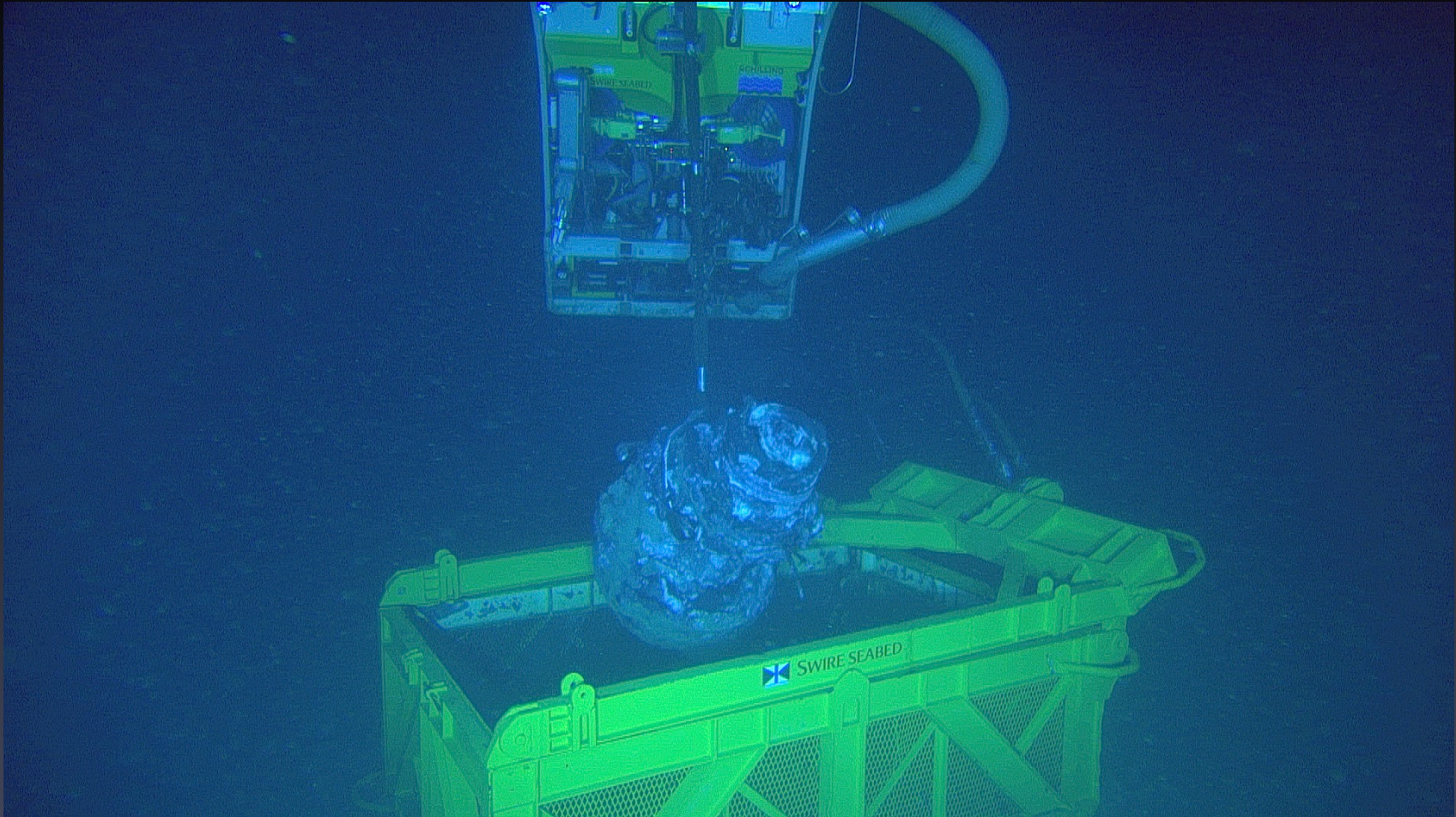


Winter Storm Saturn

^{ALL}
Bring Apollo ~~11~~



home!











PROJECT APOLLO

CHARIOT TO THE MOON

MAGNIFICENT DESOLATION

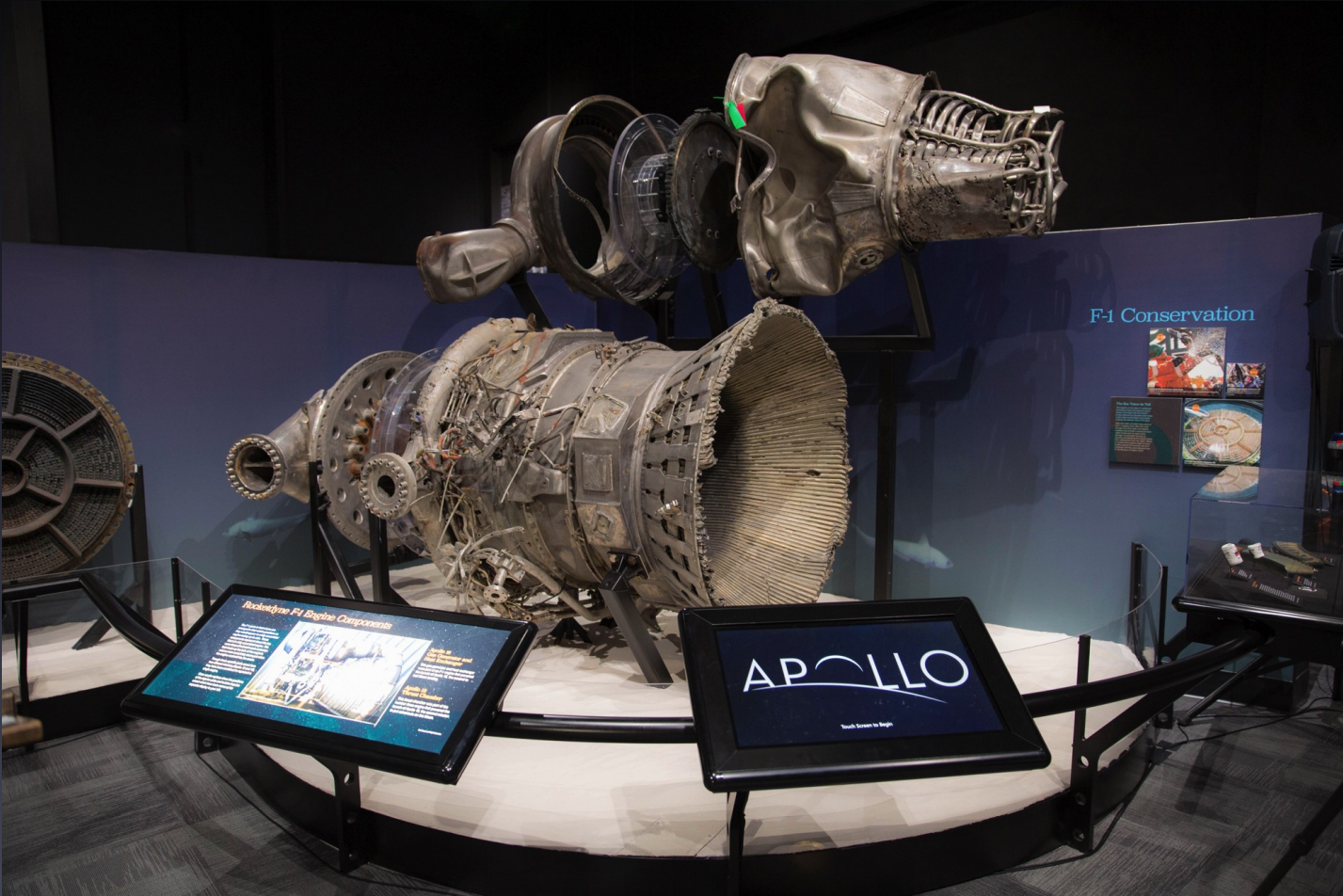
EARTHRISE

ONE SMALL STEP FOR MAN



It takes teamwork to be successful!





Reconstituted F-1 Engine Components

South America by Night

APOLLO

South America by Night

F-1 Conservation



For additional information,

- www.explorerconsulting.com
- www.bezosexpeditions.com