

A Revolution Revival: Deep Sea Drilling Project

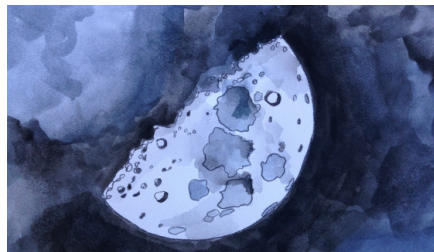
In the years following World War II, oil reserves on land were being used up quickly and the search for oil that could be found offshore (below ocean waters off the shore or coastline) was on. To conduct offshore exploration, oil companies built ships that had a special drilling rig and the ability to carry many kilometers of drill pipe.

This basic idea later was adapted in building a research ship, named the *Glomar Challenger*, designed specifically for marine geology studies, including the collection of drill-core samples from the deep ocean floor. In 1968, the ship went on on a year-long scientific expedition, criss-crossing the Mid-Atlantic Ridge between South America and Africa and drilled for core samples at specific locations. When the paleontological ages of the samples were determined, they provided some powerful evidence (paleontological ages = the sediments ages were determined by finding the position of tiny marine fossils in the core sample and by a dating technique that involves studying the isotopes of certain elements found in the sediments).

Examine the data taken by the *Glomar Challenger*. Feel free to mark the map with information from the data table.



Discuss what pattern(s) you notice and be ready to report back to your team.



Historic narrative adapted from <http://pubs.usgs.gov/gip/dynamic/developing.html>
Emoji from <http://emojipedia.org/smiling-face-with-sunglasses/>

Core samples sites, ages, and distance from the ridge taken by the *Glomar Challenger*, Deep Sea Drilling Project Leg 3, 1968

Data and map adapted from: <http://joidesresolution.org/sites/default/files/Nannofossils.pdf>

Table 1 Distances and Ages of Mid-Atlantic Ridge Sites from the Axis		
Site Number	Paleontological Age of Sediment (m.y.)	Distance From Ridge Axis (km)
16	11	221
15	24	422
18	26	506
17	33	718
14	40	745
19	49	1010
20	67	1303
21	76	1686

Adapted from Table 5', from Initial Reports of DSDP, Volume 3

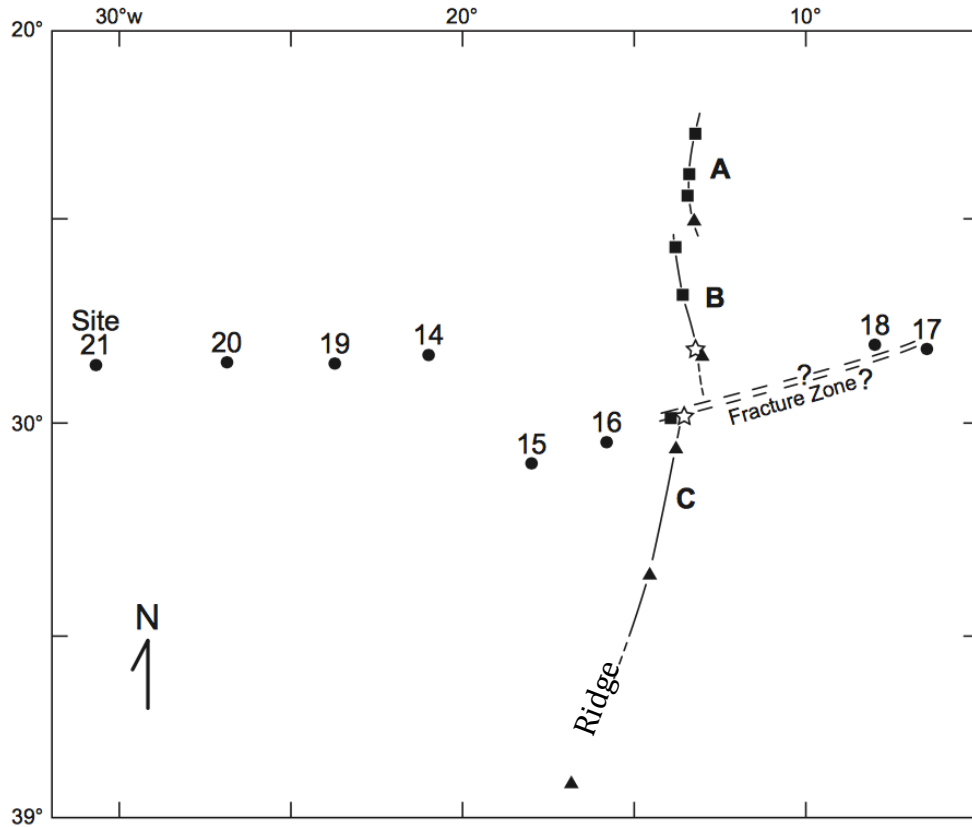


Figure 2. Location of DSDP Leg 3 drillsites relative to the axis of the Mid-Atlantic Ridge in the South Atlantic. Lines of latitude are in degrees South (i.e., 20° to 39°S)