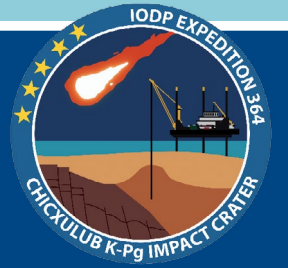


Chicxulub Impact Sequence



Exp 364 Chicxulub K-Pg Impact Crater

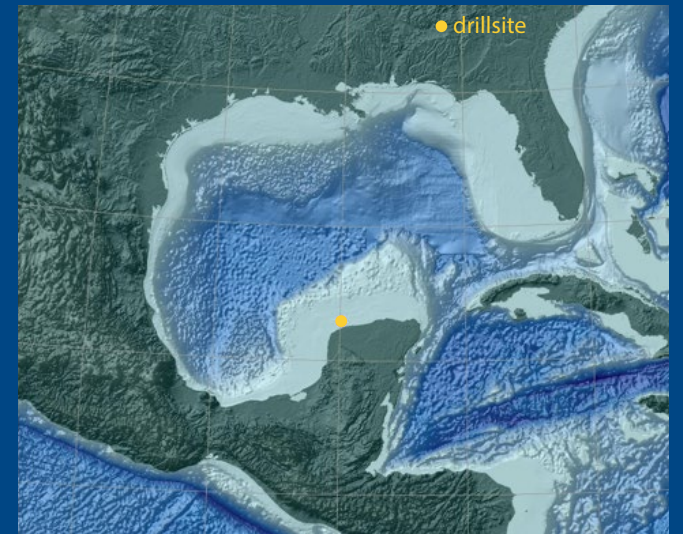
May 2016: the liftboat *Myrtle* retrieved a complete sequence of rocks that form the peak ring of the Chicxulub impact crater, in the Gulf of Mexico, 20 km NW Progreso.



Liftboat Myrtle

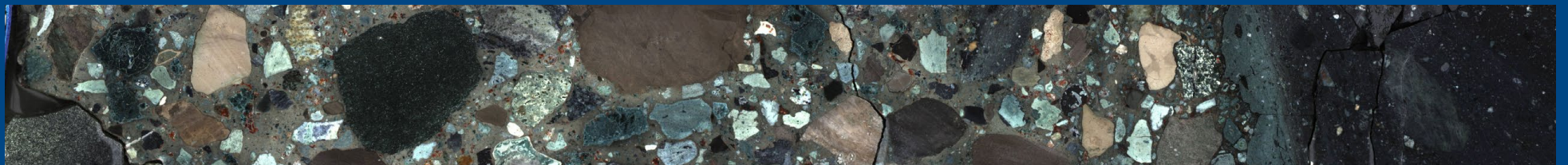
3 leg self-propelled platform
Length: 42 m
Cantilevered coring rig
Leg height: 75.4 m
46 berths (14 scientists)

57 days
303 cores
1334.7 m drilled
839.5 m recovered
Water depth: 19.8 m



708.5 mbsf

709.15 mbsf



Polymict Breccia (suevite) Impact-Melt Rock

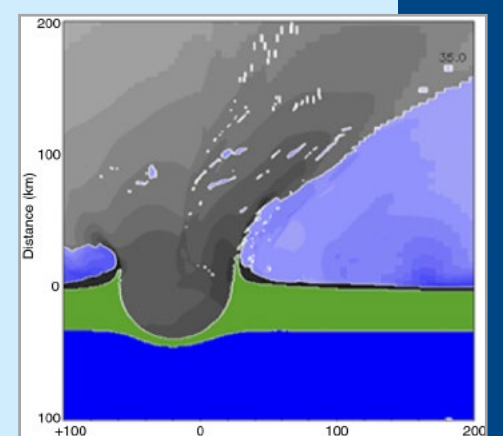
The **breccia** is composed of a **matrix** and a **variety of clasts** including **impact-melt rock** and **lithic clasts** from the carbonate platform and basement (granitoids) blasted during the impact.

The **impact-melt rock** is a clast-poor crystalline rock solidified from impact melt.

These rocks resulted from a huge meteorite impact that hit the region 65 million years ago. The Chicxulub crater is the known terrestrial impact structure that has been directly linked to a mass extinction event and the only terrestrial impact with a global ejecta layer.

Chicxulub's role in the Cretaceous/Paleogene (K-Pg) mass extinction and its exceptional state of preservation make it an important natural laboratory for the study of both large impact crater formation on Earth and other planets and the effects of large impacts on Earth's environment and ecology.

References: Morgan J, Gulick S, Mellett CL, Green SL and the Expedition 364 Scientists (2017) - Chicxulub: Drilling the K-Pg Impact Crater. Proceedings of the International Ocean Discovery Program, 364: College Station, TX (International Ocean Discovery Program) - doi:10.14379/iodp.



Simulation of ejecta plume from Chicxulub 35 s after impact.

Green = basement, gray = projectile and sediments, light blue = atmosphere, dark blue = mantle.



<http://www.iodp.org>
<http://www.ecord.org>

