

**Daily Drilling and Scientific Report for IODP/ICDP Expedition 364
Chicxulub Impact Crater 2016**



27th May 00:00 - 24:00 CDT (UTC -5)

1. Location

Position 21 Deg 27.009' N, 89 Deg 56.962' W
IODP-MSP borehole M0077A
Prospectus borehole Chix-03B
Water Depth: 19.8 m

2. Operations Report

Continue with downhole logging activities.

3. Science Report

Downhole logging operations proceeded with the acquisition of gamma ray, caliper and optical images from ~1046 mbsf to ~940 m, as the elevated bottom hole temperature inhibited the tool from working properly at depth. Following POOH, wireline operations recommenced with electrical resistivity, followed by a tool string comprising the gamma ray, sonic and borehole fluid probes. Centralized tools were not run across the interval at which the mud was lost (~940 m) in order to avoid destabilising the borehole wall. The third tool run consisted of the gamma ray, caliper and acoustic imager tool string.

At ~850 mbsf, it was noticed that the borehole diameter expanded beyond the size of the centralizer. The tool string was pulled back to the deck and centralizers changed to larger ones. Between runs, the magnetic susceptibility and induction standalone tool was run. The tool string containing the acoustic imager was sent downhole again to image the ~940-700mbsf interval. A tool string comprising the gamma ray and the fluid temperature probe was then sent to the bottom of the hole where the recorded temperature was 66°C. All data are of good quality.

4. Core Recovery Details

Hole	M0077A
Cores recovered	0
Drilled length (Coring, m)	0
Drilled length (Open hole, m)	0
Recovered length (m)	0
Recovery (%)	0
Depth at midnight (mbsf)	1334.69

5. Time Breakdown`

00:00 Continue running spectral gamma ray & optical imager
02:20 Trip pipe
07:40 Running resistivity tool (DLL)
09:30 Running spectral gamma ray, sonic, & fluid temp & conductivity
11:43 Running spectral gamma ray, caliper, & acoustic imager
16:12 Running induction and magnetic susceptibility tool
18:40 Re-running spectral gamma ray, caliper and acoustic imager with new centralizer
23:50 Running spectral gamma ray & fluid temp & conductivity
24:00 Continue downhole logging activities

6. Hours (inc. cumulative total) – no contractual implications can be made from these figures

In port	13.0
Transiting	3.0
Operating	966
Technical downtime	123
Weather downtime	0.0
Other downtime (specify)	0.0

7. Weather

Fair, cloudy, humid, wave heights of 0.5 – 0.8 m; wind E 15 Kts, Temperature 27-34°C.

8. Planned Activity for the next 24 hours

Continue with logging activities and Vertical Seismic Profiling (VSP).

9. Health and Safety and Environmental

N/A

10. Photo of the day



Image: DSmith©ECORD_IODP