

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



**27th Apr 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**

Another excellent day of coring continued. A total of 14 core runs completed, 100% recovery, no change of cored diameter with few breaks. Film crew arrived for a 4 day shoot of the coring.

**3. Science Report**

We have now transitioned through two major changes. Bottom of Core 36R we were in the Early Eocene whereas top of Core 37 appears to be a mixed assemblage of Eocene and Danian right above a dark interval ~20 cm thick, below which we are in Danian limestones. In Core 40R (620 mbsf) we transitioned from a limestone to a marlstone to a sandstone. Within the sandstone clast sizes increased down core for core after core with at least one cycle of becoming finer again before coarsening again down section. By Core 50R we have angular clasts that are a mix of lithologies and many are larger than 1 cm and thus suggestive of a breccia.

**4. Core Recovery Details**

<b>Hole</b>	M0077A
<b>Cores recovered</b>	14
<b>Drilled length (Coring, m)</b>	40
<b>Drilled length (Open hole, m)</b>	0
<b>Recovered length (m)</b>	40
<b>Recovery (%)</b>	100
<b>Depth at midnight (mbsf)</b>	635

**5. Time Breakdown**

00:00 Continue coring  
00:50 Core on deck  
02:30 Core on deck  
04:15 Core on deck  
05:55 Core on deck  
06:30 Crew vessel arrived to transfer personnel  
07:25 Core on deck  
10:00 Core on deck  
12:30 Core on deck  
15:20 Core on deck  
17:15 Core on deck  
18:30 Core on deck  
19:20 Core on deck  
20:27 Core on deck  
22:00 Core on deck  
23:20 Core on deck

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

<b>In port</b>	13.0
<b>Transiting</b>	3.0
<b>Operating</b>	420
<b>Technical downtime</b>	117
<b>Weather downtime</b>	0.0
<b>Other downtime (specify)</b>	0.0

**7. Weather**

Fair, sunny, good visibility, wave heights of 0.3 – 0.5 m; wind NE 15 Kts, Temperature 24-35°C.

**8. Planned Activity for the next 24 hours**

Continue coring.

**9. Health and Safety and Environmental**

N/A

**10. Photo of the day**



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