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



10th 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

Coring continued. While drilling Core 123R, a loss of circulation was noted at ~821 mbsf. Loss circulation material was pumped down the hole followed by drilling mud, and coring resumed. Following several unsuccessful attempts to core, the drill string was tripped for a suspected worn bit. After recovering the BHA and changing the bit, the pipe was run in and reached the base of the hole and coring recommenced.

3. Science Report

Core continues to be pure granite. A large piece in the core catcher had a significant near-vertical shear zone filled with fault gouge. Fracturing of granite and physical property logs are consistent with previous core. During drilling of Core 122R the drilling rate increased significantly (softer granite?), and then circulation was lost in the subsequent coring suggesting there might be some caving in the hole.

4. Core Recovery Details

Hole	M0077A
Cores recovered	4
Drilled length (Coring, m)	11.30
Drilled length (Open hole, m)	0
Recovered length (m)	11.53
Recovery (%)	100
Depth at midnight (mbsf)	823.24

5. Time Breakdown

00:00	Continue coring
01:45	Core on deck
03:45	Core on deck
05:35	Core on deck
07:25	Core on deck
09:50	Start tripping pipe
15:44	Recover BHA and change bit
16:00	Start running pipe
21:45	Start coring
24:00	Continue coring

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

In port	13.0
Transiting	3.0
Operating	587
Technical downtime	121
Weather downtime	0.0
Other downtime (specify)	0.0

7. Weather

Fair, clear, good visibility, wave heights of 0.5 - 0.8 m; wind NE 15 Kts, Temperature 21-30°C.

8. Planned Activity for the next 24 hours

Continue coring.

9. Health and Safety and Environmental $N\!/\!A$

10. Photo of the day



Image: JLofi©ECORD_IODP.