



Daily Drilling and Scientific Report for IODP Expedition 325, Great Barrier Reef Environmental Change

29th March 2010 (0000 - 2400 local time)

1. Location

NOG_01B Site 7

Time zone: Brisbane Australia Time, UTC +10

Position at midnight (on station M0054A):

Latitude: 17° 06.042 S

Longitude: 146° 34.60458 E

2. Activity summary

Completed coring operations at M0053A and moved onto station at NOG_01B Site 7 where coring began using the HQ system.

3. Science report

Cores 29R and 30R advanced to 32.3 mbsf and recovered carbonate sands composed of coral fragments, coralline algal crusts, benthic forams, Halimeda and bivalves. Core 31R advanced a further 2 m and recovered carbonate sands. However, we also cored a 10 cm massive coral (insitu?) from between 32.3 - 34.7 mbsf. This is a key specimen and might represent older Pleistocene corals. The decision was made to core further in an attempt to recover more of these valuable corals. Cores 32R and 33R advanced to 37.3 mbsf and recovered only carbonate sands composed of Halimeda, large benthic forams, echinoderm spines etc, and so the hole was terminated.

On site (M0054A), the hole was open holed (washed out) down to 9.42 mbsf before coring commenced. Core 1R advanced to 11.02 mbsf and recovered only wash. Cores 2R recovered 44 cm of continuous coralgal/microbialite framestones. Core 3R advanced to 14.22 mbsf and recovered 1.2 m of continuous coralgal/microbialite framestones – corals composed of massive and branching *Acropora*, encrusted by thick coralline crusts that were in turn covered by microbialite with internal sediments. Unfortunately cores 3R-6R continued to 18.72 m with zero recovery.

4. Core recovery details

Hole	M0053A	M0054A
LAT water depth	97.0m	107.4m
Cores recovered	29R – 33R	1R – 6R

Drilled length	7.7m	9.3m
Recovery length	1.7m	1.65m
Recovery	22.08%	17.74%
Depth at midnight	37.3mbsf (final depth)	18.72mbsf

5. Weather

Sea state: rough (5) with a swell of 2.5 – 4m becoming moderate (4) with a swell of 1.25 – 2.5m by midday; wind direction SE swinging ESE by early morning force 5 (17 – 21 knots); overcast with periods of heavy rain in the morning becoming partly cloudy by midday; 29°C.

Next 24 hrs: Sea state moderate with swell of 1.7 -2.2 m in open waters; wind direction SE 15 – 20 knots reaching 20 – 25 knots outside the reef at times; scattered showers.