Week 4 Drilling and Scientific Report for IODP Expedition 325
Great Barrier Reef Environmental Changes

12th March – 18th March 2010

1. Operations

During the last couple of days the weather had been slowly deteriorating and the sea state increasing.
Just after midnight on March 12th, with recovery of core run 14, hole M0047A was completed to a depth of 33.2 mbsf.
The vessel was moved to the next site and in the early hours was spudded in. After core run 4, and with the wind blowing consistently over 30 knots for several hours, the operation was halted as the drill heave compensator had reached its limit. The vessel DP was stable, although it was being pushed up to 3m off station.
The drill string was tripped and the vessel made ready for sailing. As a shipment of mud was due to arrive in the late afternoon the vessel transited through Hydrographer's Passage to a sheltered area behind White Tip Reef. With the mud on board and stowed the vessel headed north in the inner channel, with a view to attempt to drill the northern areas. The weather outlook for this region is poor with a depression east of Australia deepening and becoming the named cyclone ULUI, heading for Queensland.
Whilst in transit, it became clear that the northern sites would also be unworkable due to the influence of tropical cyclone Ului, and so the vessel anchored at the Townsville Anchorage site at 15:30 on March 13th. Both the pilot and one crew member from ESO departed the Maya via a small boat transfer at this point.
The Greatship Maya remained at anchor for March 14th, before coming alongside in Townsville Port, Berth 10, at 21:00 on March 15th. The shoreside crane was used to bring on additional drilling mud, a bumper sub and provisions on March 16th. In addition, there was a crew change for GC Rieber, Bluestone and ESO personnel. The vessel departed the port for the anchorage site at 20:35 on the 16th, arriving at anchor by 22:05. She remained at anchor for March 17th and 18th. A small boat delivered additional extended nose ALN drill bits on March 17th.
The ESO Operations team, the Master of the Maya, the Bluestone Party Chief and the two Co-chiefs continued to assess the incoming weather forecasts twice daily.

2. Hole summary

Hole	M0047A	M0048A
Latitude	19^0 47.98513 S	19^0 48.07058 S
Longitude	150^0 28.73131 E	150^0 28.65916 E
First core	11/03/2010 at 14:30	12/03/2010 at 04:05
Cores recovered	14R	1R – 4R
Drilled length	1.5m	7.1m
Recovered length	0.31m	0.69m
Core recovery	20.67%	9.72%
Depth reached	33.2 mbsf (final depth)	7.1 mbsf (final depth)

3. Science summary

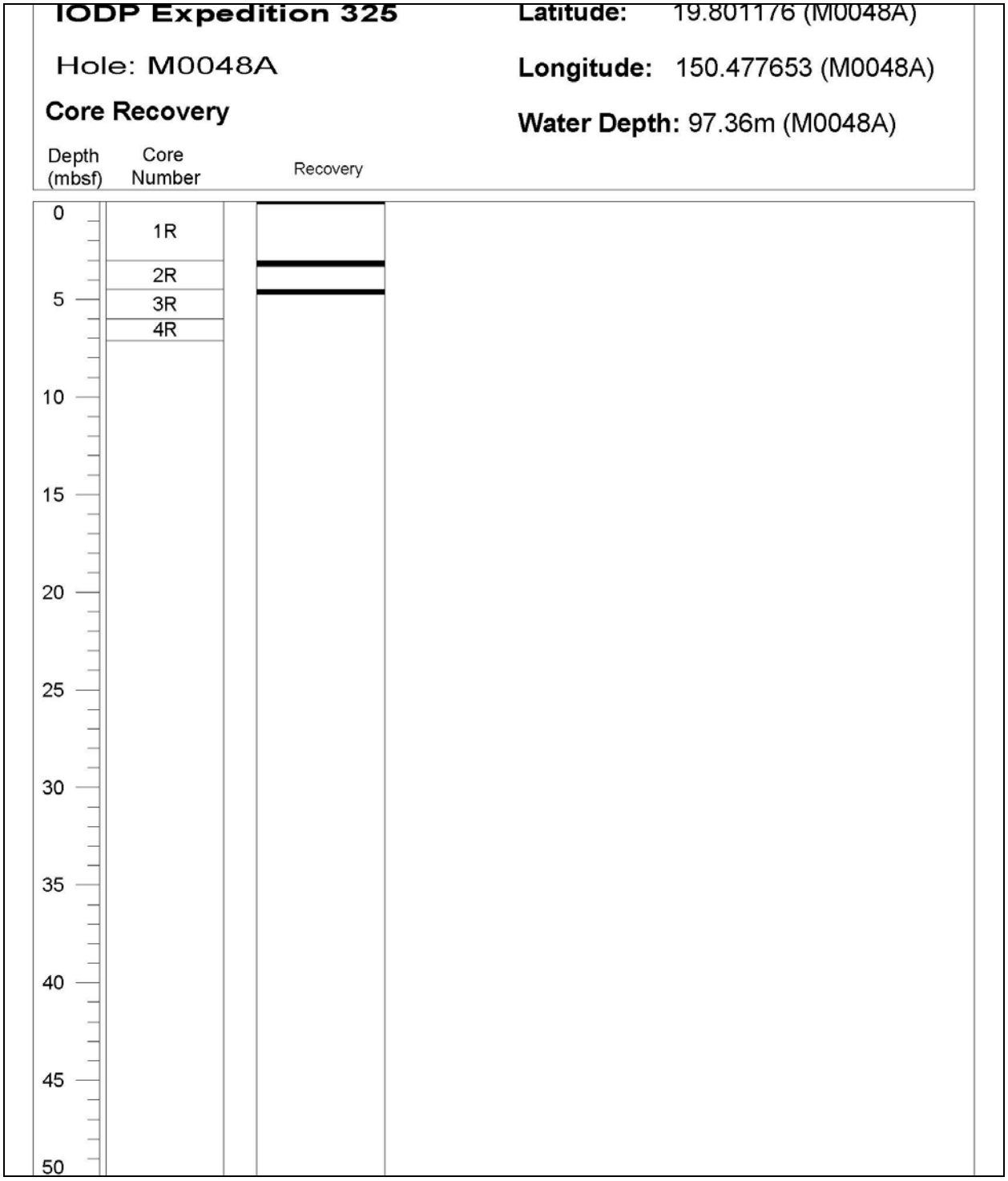
Hole	Core	Sediment Description	Comments
M0047	14R	Broken coral fragments and carbonate sands	
M0048R	1R	Disturbed carbonate sediments and broken fragments of coralgal-microbialite framestones	~30cm recovered. *Faviids* and *Pocilloporids*
	2R & 3R	Broken and ground coral framestone composed of *Acropora*, *Faviids* and *Pocilloporids* with carbonate sands and gravels	
	4R	No recovery due to weather conditions	
	Hole abandoned due to deteriorating weather conditions		

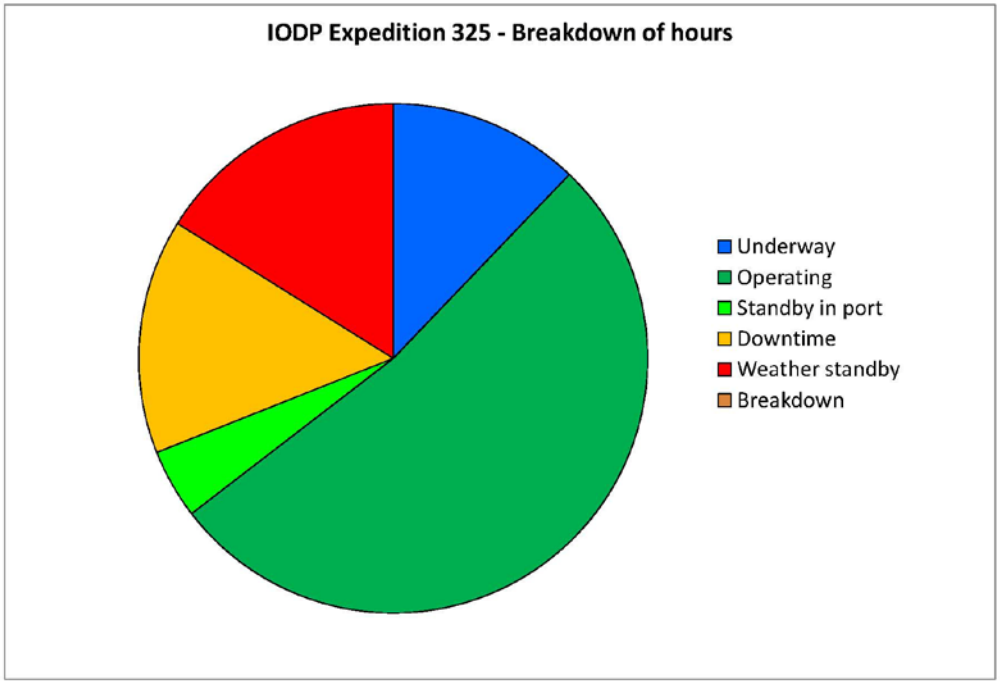
4. HSE Activities / Environmental

Preparations were made in advance of the strong winds forecast, securing all containers, equipment inside, cables, winches and banners.
The ship's crew underwent SOLAS training sessions on March 14th. All new on-signing crew had a vessel induction at 15:00 on March 16th, and a full "General Alarm" Muster was conducted at 22:15 for all personnel onboard.
Work on painting walkways around the main deck and drill floor with a non-slip grit was undertaken on March 17th and 18th while waiting on weather at anchor.

5. Figures

On next two pages:
Figure 1 – Recovery and depth plot for Hole M0048A
Figure 2 – Breakdown of hours up to 2400 hrs on 18th March. No contractual implications can be made from this summary.


IODP Expedition 325
Hole: M0048A
Core Recovery
Latitude: 19.801176 (M0048A)
Longitude: 150.477653 (M0048A)
Water Depth: 97.36m (M0048A)
Depth (mbsf)
Core Number
Recovery
0
5
10
15
20
25
30
35
40
45
50
1R
2R
3R
4R



Note on Figure 2. The diagram above includes an estimated “downtime” of 14 hours, “standby in port” of 13.5 hours, “underway” of 45.75 hours and “weather standby” on a named cyclone of 129 hours that occurred off contract.