Figure F1. Location map of Site U1470, located in the southern branch of the Kardiva Channel as the eastern site of the southern transect.

Figure F2. Seismic section along the southern transect with Expedition 359 sites. Site U1470 forms the western end of this southern transect and penetrates through a succession of drift deposits overlying a drowned carbonate bank. Blue horizon = base of drift deposits in the basin. At Site U1470, a stage of carbonate platform growth is observed above this horizon. CDP = common depth point.

Figure F3. Lithostratigraphic summary, Site U1470.

Figure F4. Smear slide images from Unit I. A. Planktonic foraminifers (1) are the main skeletal component (359-U1470A-4H-2, 125 cm). B. Apatite (2) is present in a few intervals.

Figure F5. Transition from Unit I (359-U1470A-7H-CC) to Unit II (8H-1). Visually distinct color change to lighter tones in photos corresponds with shift to higher L*.

Figure F6. Unit II/III boundary (359-U1470A-17H-3) at 148.10 mbsf with change from packstone–grainstone to dolomitized floatstone–rudstone with corals.

Figure F7. Main components, Unit III. A. Massive coral fragment (359-U1470B-2R-CC, 15–19 cm). B. Branching red algae (2R-CC, 19–22 cm).

Figure F8. Large benthic foraminiferal grainstone characteristic of Unit IV (359-U1470B-5R-2, 15–25 cm). 1 = shell fragment, 2 = large benthic foraminifer (*Lepidocyclina* sp.).

Figure F9. Bioclastic rudstone, Unit IV (359-U1470B-5R-3, 23–26 cm; plane-polarized light). 1 = *Lepidocyclina* sp., 2 = *Amphistegina* sp., 3 = partially dissolved *Halimeda* fragment, 4 = echinoderm fragment.

Figure F10. Floatstone, Hole U1470B. A. Red algal floatstone (6R-1, 30–37 cm). 1 = gastropod mold, 2 = rhodolith, 3 = mollusk mold. B. Coral-rich floatstone (7R-1, 27–57 cm). 4 = branching coral, 5 = large mollusk shell.

Figure F11. Increase in crystal size from Unit III to Unit V. A. Syntaxial overgrowth of echinoderm fragment (359-U1470B-5R-3, 23–26 cm). B. Poikilotopic cement (18R-1W, 16–18 cm).

Figure F12. Biostratigraphic and paleoenvironmental summary, Site U1470. Calcareous nannofossil and planktonic foraminifer biozonation is shown with paleoenvironmental information provided by benthic foraminifers and ostracods.

Figure F13. Age-depth plot, Site U1470. Details of each event plotted are given in Table **T2**.

Figure F14. IW Cl^-, Na^+, K^+, and SO_4^{2-} concentrations, Hole U1470A.

Figure F15. IW Ca^{2+}, Mg^{2+}, and Sr^{2+} concentrations, Hole U1470A.

Figure F16. IW alkalinity and hydrogen (pH) concentrations, Hole U1470A.

Figure F17. Carbonate and organic carbon contents, Site U1470.

Figure F18. Relative concentrations of aragonite, HMC, LMC, dolomite, and quartz measured using XRD, Site U1470.

Figure F19. Mg/Ca, Sr/Ca, Mn/Ca, and Fe/Ca ratios in sediments, Site U1470.

Figure F20. Headspace methane concentrations, Site U1470.

Figure F21. Excess SO_4^{2-}, Mg^{2+}, Ca^{2+}, and alkalinity, Site U1470.

Figure F22. NRM intensity, declination, and inclination of APC cores, Hole U1470A. As at other sites, the upper part of each core shows extremely large NRM intensities, which were interpreted as drill pipe contamination. Below 60 mbsf (Core 8H), an obvious artifact in the declination and inclination record assumes a constant direction of ~090°/00°.

Figure F24. NRM intensity, declination, and inclination of APC cores following removal of high-intensity peaks, Hole U1470A. Green lines = possible geomagnetic reversals as shown by changes in declination within a single core.

Figure F23. Magnetic moment, Hole U1470A. A. *X*, *Y*, and *Z* components after demagnetization at 30 mT and removal of highly magnetized intervals with magnetization $>1 \times 10^{-4}$ A/m. *Y* component shows two distinct distributions below and above 60 mbsf. We assume the difference is due to a bias in the measurements that was tentatively corrected by subtracting a moment of 2×10^{-9} A/m^2 to all cores below 60 mbsf. B. Corrected *Y* component of measurements taken below 60 mbsf compared with original *X*, *Y*, and *Z* components.

Figure F25. Color reflectance (L*, a*, and b*) and magnetic susceptibility measured with MSL and MSP, Site U1470.

Figure F26. NGR, GRA and MAD bulk density, grain and dry density, porosity, and *P*-wave velocity on WRMSL and PWC, Site U1470.

Figure F27. Thermal conductivity, shear strength, and water content, Site U1470.

Figure F28. Logs recorded during aborted logging run with sonic-resistivity tool string, Hole U1470B. Resistivity: R3 = medium resistivity, R5 = deepest resistivity, RT = true resistivity, modeled from all depths of investigation.

Figure F29. Seismic section of the drowned carbonate platform that is onlapped and buried by drift sequences. Site U1470 is located at the edge of the drowned platform. Dark blue line marks horizon between platform and drift sequences in the northern transect (base of DS1). Site U1470 was cored at a location where drowning of the local carbonate bank postdates DS1 deposition.

Figure F30. Time-depth conversion, Site U1470.

Figure F31. Correlation of seismic and core data, Site U1470. Seismic Line 32 (SO236) is shown with the platform and drift sequences. The interval velocity is used for the time-depth conversion.