

Figure F1. A. Bathymetric map of the South China Sea region. Solid yellow circles = Expedition 349 sites. Solid pink circles = ODP Leg 184 sites. Yellow dashed line = inferred continent/ocean boundary, blue lines = fossil South China Sea spreading center, white-flagged line = Manila Trench. B. Detailed bathymetry around Site U1432 (red box in A) showing nearby continental shelf, the Manila Trench, and inferred continent/ocean boundary.

Figure F2. A. Regional contoured bathymetric map showing seismic reflection profiles (yellow, pink, and blue lines) and the location of Sites U1432 and U1435 and Ocean Drilling Program (ODP) Site 1148. Contour interval = 100 m. B. Seismic profile Line 973SCSIO\_01A with location of Site U1435. SP = shotpoint.

Figure F3. Lithostratigraphy summary, Site U1435.

Figure F4. Correlation of lithostratigraphic units with magnetic susceptibility and reflectance spectroscopy (after 20-point running average), Site U1435.

Figure F5. Manganese nodule, suggestive of very slow sedimentation at this site in the recent geological past during deposition of Subunit IA, Hole U1435A (3R-CCA, 1–5 cm).

Figure F6. Burrows in Subunit IB, Hole U1435A. A. *Planolites*, *Chondrites*, and *Thalassinoides* (5R-1A, 106–114 cm). B. *Zoophycos* and *Planolites* (7R-2A, 137–144 cm).

Figure F7. White clay layer in Subunit IB nannofossil-rich clay, Hole U1435A (7R-1A, 138–145 cm).

Figure F8. Clay with nannofossil ooze in Subunit IB, Hole U1435A (6R-1A, 95 cm; plane-polarized light [PPL]).

Figure F9. Clay with calcite crystals in Subunit IB, Hole U1435A (PPL). Calcite is a diagenetic product. A. 9R-2A, 91 cm. B. 7R-2A, 138 cm. Sparse nannofossils are circled.

Figure F10. (A) Core image and (B, C) photomicrographs (PPL) of the carbonate rock separating Units I and II, immediately overlying sandstone, Hole U1435A (9R-2, 137–140 cm; TS119). In photomicrographs, note pods of recrystallized calcite spar within a background of micritic carbonate mudstone.

Figure F11. Conglomerate bed in Unit III, Hole U1435A (29R-CC, 23–29 cm).

Figure F12. Unit II, Hole U1435A. (A) Carbon fragments in sandstone (10R-2A, 65–71 cm) and (B) limestone pebble in sand (15R-1A, 28–34 cm).

Figure F13. Finer grained facies, Hole U1435A. A. Clayey siltstone with *Planolites* burrows (27R-6A, 55–65 cm; Unit II). B. Very thin sand lenses interbedded with mudstone (29R-5A, 99–107 cm; Unit III). C. Massive black silty claystone (32R-1A, 29–37 cm; Unit III).

Figure F14. Sandstone in Unit II, Hole U1435A. A. Medium sandstone and interbedded claystone with *Chondrites* trace fossils (19R-6, 65–73 cm). B. Laminated silty sandstone overlying a gently inclined erosion surface (19R-2A, 40–48 cm).

Figure F15. Bioturbated silty sandstone in (A, B) Unit II and (C) Unit III showing large *Thalassinoides* burrows (circled in A and B), Hole U1435A. A. 20R-5A, 129–138 cm. B. 18R-5A, 58–70 cm. C. Vertical burrows in 30R-1A, 28–38 cm.

Figure F16. Bivalves in sandstone of Unit II, Hole U1435A. A. 20R-CC, 10–16 cm. B. 16R-7A, 23–29 cm.

Figure F17. Sand in Unit II showing poor sorting, subangular grains, and quartz-dominated mineralogy, Hole U1435A (PPL). A. 9R-3A, 60 cm. B. 18R-4A, 113 cm.

Figure F18. Pyrite concretion in thinly laminated sandstone and claystone in Unit III, Hole U1435A (30R-3A, 61–64 cm).

Figure F19. Age-depth model. FAD = first appearance datum, LAD = last appearance datum, FCA = first common appearance, LCA = last common appearance, wavy line = possible hiatus.

Figure F20. Interstitial water bromide, chloride, and sodium contents and Na/Cl ratios.

Figure F21. Interstitial water alkalinity, sulfate, calcium, and magnesium, Hole U1435A.

Figure F22. Hydrocarbon gases, Hole U1435A.

Figure F23. Calcium carbonate, TOC, total nitrogen, and C/N ratios.

Figure F24. Microbiology whole-round and contamination testing sample collection depths.

Figure F25. Paleomagnetic measurements of NRM inclination and intensity on archive core sections after 0 mT (red) and 20 mT (blue) AF demagnetization, Hole U1435A.

Figure F26. A–D. Representative vector endpoint diagrams (Zijderveld, 1967) of magnetization directions for sediment samples through stepwise AF demagnetization.

Figure F27. Magnetostratigraphic results with biostratigraphic age correlation, Hole U1435A. Paleomagnetic inclination after 20 mT AF demagnetization. For polarity and GPTS (Gradstein et al., 2012), black = normal polarity and white = reversed polarity. ? = uncertain correlation or questionable chron identification.

Figure F28. Physical property measurements, Hole U1435A. Red lines = correlation between physical property changes associated with lithostratigraphic boundaries and lithification changes.