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Tectonic controls on the stratigraphic development of the rifted Taipei Basin: A late quaternary marine-influenced inland half graben

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1 **Tectonic controls on the stratigraphic development of the rifted Taipei**
2 **Basin: a late Quaternary marine-influenced inland half graben**

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12
13 **Abstract**

14 We establish the three-dimensional stratigraphic architecture of the Taipei Basin and its
15 spatiotemporal palaeoenvironmental development during the past 50 kyr by analysing 36
16 borehole cores and 177 age dates. We calculate the rates of basin subsidence from the
17 borehole data at depths where radiocarbon age dates are available. Our results indicate
18 that, during the eustatic sea level falling period (35–20 ka), low rates of sediment supply
19 and/or rapid basin subsidence controlled sedimentation, leading to a change in the
20 depositional environment from gravelly braided rivers, through sandy braided rivers, to
21 meandering rivers with falling eustatic sea level. During the early stage of eustatic sea

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