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Abstract

Authigenic carbonates recovered from two newly discovered active cold seeps on the northwestern slope of the South China Sea have been studied using petrography, mineralogy, stable carbon and oxygen isotopic, as well as trace element compositions, together with AMS ^{14}C ages of shells of seep-dwelling bivalves to unravel fluid sources, formation conditions, and seepage dynamics. The two seeps (ROV1 and ROV2), referred to as 'Haima seeps' herein, are approximately 7 kilometers apart, and

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