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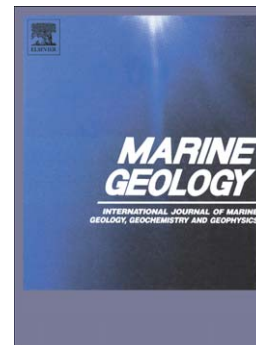
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**Lithology and characteristics of the Messinian evaporite sequence of
the deep Levant Basin, eastern Mediterranean**

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Abstract

As the lithological composition of the Messinian salt sequence of the Levant Basin is still controversial and unconstrained, we reveal for the first time the lithology of the entire evaporite sequence from deep basin depth migrated seismic and borehole data. The data presented here shows that the seismic transparent layers are composed of pure and uniform halite while the reflective layers are bundles of thin clay layers interbedded in the halite background. The thin clay layers inside the deep basin evaporites have a cumulative thickness of 25-40 m. High amplitude fan structures are observed on the deepest internal reflector which may suggest clay transportation. Among all the internal reflectors, the upper units are more deformed while the deeper units are more coherent and flat. Two sets of folds/faults are shown on the shallower intra-units: folds with NNE-SSW trending axes and thrust faults

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