east-southeast- or west-northwest- dipping slopes. Another deformed unit, possibly also slumped, contains brecciated mudstone and has sand volcanoes on its upper surface. This indicates that the sediment was susceptible to dewatering, possibly in association with slumping, or after liquefaction.

The pattern of deformation in the slumps is complex, with tight to isoclinal folds, refolded folds, and thrust faults all present. The slumps may be highly coherent, or may be chaotic, containing detached fold hinges and isolated blocks/clasts of siltstone and sandstone in a shale matrix. In many cases the slumps decrease in coherence from base to top. There are also significant lateral variations in fold complexity and thickness of slumps. Some of the slump units contain unusual boudin-like features. These features are up to 0.2 meters across in section, and at least several metres long, with their long direction parallel to the orientation of fold hinges in the slumps. The boudins are composed of red siltstone or mudstone, and have a variety of cross-sectional shapes, including round, elliptical, aerofoil-shaped, and complex examples. Polished slabs cut perpendicular to the long direction of the features show complex internal folding, including sheath folds parallel to the long axis of the boudins, while slabs cut parallel to the long direction show a planar lamination cut by cm-scale normal faults. These boudin-like features seem to have formed through detachment of fold hinges during slumping, followed by rolling and shearing of the detached hinges during continued slumping and compaction.

Syn-sedimentary folding and boudinage in the Tournaisian Albert Formation, southern New Brunswick

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The Albert Formation section along the new Highway 1 between Sussex and Norton contains numerous deformed units that are not considered tectonic in origin. Many units consist of folded, faulted, brecciated, and boudinaged sandstone, siltstone, and shale within undeformed master bedding. Scours and erosional contacts at the base of some, and sand volcanoes and truncated folds at the top of other deformed beds, are further evidence that the deformation in the units is syn-sedimentary. Stereoplots of fold orientations from several of the deformed units show that fold plunges are subhorizontal and trend north-northeast or south-southwest, while axial planes plot on a great circle girdle. This pattern is thought to result from the slumping of Albert Formation sediment down