

**Carbonate microbial mounds, mineralized vents, periplatformal oozes,
and slump domes in Macumber equivalents, eastern Cape Breton**

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Coarse, fascicular-optic calcite comprises scores of mounds that range in diameter from decimetres to decametres in basal Windsor strata. They contain a restricted fauna of vertical microbial strands coating homomorphic corals and bryozoa, nests of almost monospecific brachiopods, shrimp-like arthropods, and probable vestimentiferan worm tubes. Surrounding strata are of two main lithologies: black, peloidal carbonate laminites with slump structures and complexly slumped, vuggy dolomudstones with large, discordant, mineralized pipes. Crystals of calcite, baryte, and galena partially fill the vugs and pipes.

The mounds grew in deep, saline, anoxic water as organic

“oases” of chemosynthetic communities. Bacterial activity concentrated over methane and/or hydrogen sulfide vents may have supported the communities, induced carbonate precipitation, and promoted both sulfate and sulfide deposition. They are similar to deep-water, tufa towers in saline rift lakes of the Great Basin (U.S.A.) and Africa. Laminites are rhythmites related to sulphate-reducing bacteria in a deep-basin/deep-water meromictic, lacustrine-like rift basin. The dolomudstones were slumped, peri-platformal oozes injected from below by small and large volumes of fluids.