Collection and the question of the collapsing of the hierarchy

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We consider restricted versions of the collection scheme $B\Sigma_1$ of the form $B\exists\Sigma_n^b$, where $\exists\Sigma_n^b$ is a class of Σ_1 formulas of restricetd complexity. Also we consider the notion of an $\exists\Sigma_n^b$ maximal model and we study the question whether such a model satisfies $B\exists\Sigma_m^b$ for some m, n. This question is related to the collapsing question of the hierarchy of bounded arithmetical formulas.