We prove that if X is a locally finite n-dimensional polyhedron such that $X \times I^{\infty}$ admits a \mathcal{Z} -compactification, then $X \times I^{2n+5}$ also admits a \mathcal{Z} -compactification. Our argument makes use of an extension of Dierker's lemma which, in its original form, says that if a finite polyhedron X collapses to a finite polyhedron Y, then there is a q such that $Y \times I^q$ collapses to X.