ABSTRACT Drill cuttings are the most common stemming material used globally in open pits and quarries. But, at very high level pressure, dry drill cuttings ejected very easily from blast holes with explosion without much resistance and a great percentage of blast energy is wasted and lost to the atmosphere. In order to solve this problem, plaster was used for stemming blast holes and successful results were obtained. Plaster solution is hardened as concrete in almost twenty five minutes and can plug collar of blastholes and more confinement and more efficiency with plaster plug gave more blasting energy. In order to see results of this method, at a limestone quarry, classic drill cuttings stemming method and plaster stemming method were compared. At same quarry bench, the spacing and burden distance to become larger for plaster stemming, more profit blasting process was made and better fragmentation was obtained.