This paper describes the result of full scale pullout test of nine cement columns. Diameter of the columns was 0.50 m and the columns length are varied from 2 to 14 m. The cement column were installed by Jet Grouting method into the soft clay layer. The distal part of anchor rods, which was buried in cement column, was made like the head of arrow to increase anchor load at the distal part. Nine anchor rods were installed with electrical strain gauge in different levels to measure the load distribution in the anchor rods. The pullout test were carried out in step loading and each load increment is maintained for 60 min. Field test results show that the column, with length of more than 4 m, failed in the anchor rod / cement column interface. The cement column with length of 2 m failed in column/soil interface. It demonstrated that the failure load can be predicted by the critical creep load of the column.