



Dumas J.C.(1992).
Comparisons of settlements predicted
by PMT and DMT in a silty-sandy soil
in Quebec. Personal communication.

GEO PAC

Soil improvement contractors
Montréal QC • Vancouver BC • Wilmington DE

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September 10, 1992

Gentlemen:

The dilatometer we have purchased from your Company last spring was immediately put to use on a Dynamic Compaction ground improvement project. We are writing this letter to tell you that we are eminently satisfied with our acquisition and the support we have had from your Company, especially that of Mr. John A. Hayes your representative in Canada. We also wanted to profit of this occasion to give you, through the Figures 1 to 18 which are included herein, an outlook of the data that we have acquired, hoping that you may possibly read in these data details that have escaped our inexperienced eyes .

THE TREATMENT

The site is situated in Trois-Rivières, Québec, on the North shore of the St. Lawrence River, approximately halfway between Montréal and Québec City.

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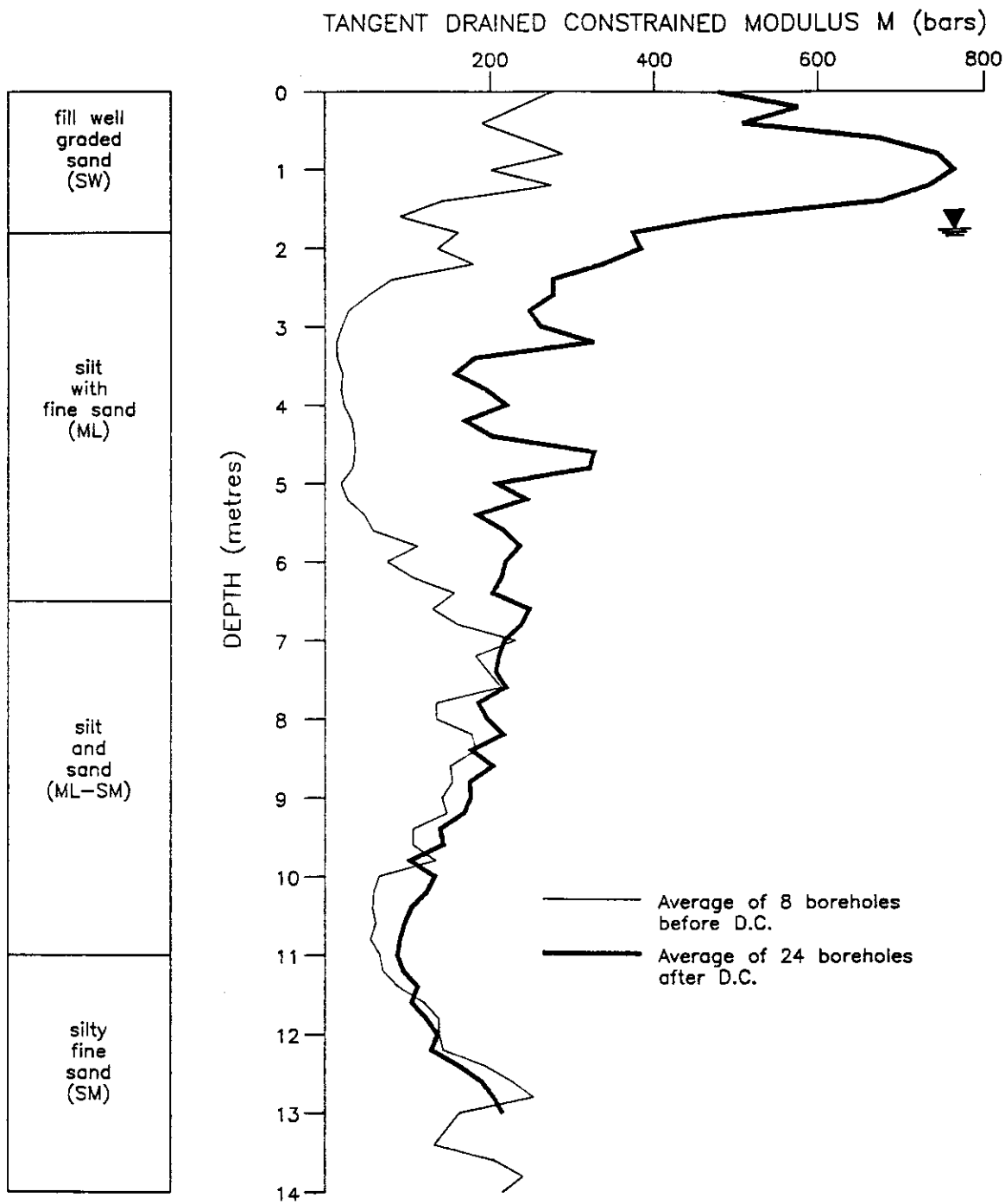
VERIFICATION TESTING

Verification testing was performed by means of 14 pressuremeter boreholes, 4 before and 10 after, and 32 Marchetti Dilatometer soundings, 8 before and 24 after. The after tests were generally performed between the sand columns, although a few were performed directly on the center of columns, a factor taken into consideration in our interpretation of the verification test data, as well as in the discussion and comments that follow. Because of the imperatives of

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As a general comment, it can be noted that before and after DMT and PMT profiles are shaped similarly and that the improvement indicated by these two tests are comparable. The results of bearing capacity and settlement calculations using DMT and PMT data and methods also compare relatively well. Some of the higher values of bearing capacity in Figures 10 and 11 are at least partly attributable to the fact that the tests were performed in the centre of sand columns. The settlement calculated with the DMT method seems to be generally higher than that calculated with the PMT method. The absolute difference however does not exceed 7mm, nothing that we could be really concerned about.

can complete four DMT soundings in the time it takes to perform one pressuremeter profile, an advantage that evidently cannot be overlooked.



INCREASE OF CONSTRAINED MODULUS M WITH MARCHETTI'S DILATOMETER