A marine-oriented structural engineering firm, TERA, Inc., Houston, Texas, is engaged in a project to evaluate the reliability of offshore pile driving prediction methods, a step toward an eventual capability for predicting the best pile driving technique for each new offshore oil platform. TERA is conducting the evaluation in behalf of seven offshore oil rig operators: Chevron Corporation, Conoco, Inc., Marathon Oil Company, McDermott International, Inc., Mobil Oil Research and Development Corporation, Pennzoil Company and Shell Oil Company. The upper right photo shows an offshore pile driving operation; at lower right is a working offshore platform.

In Phase I of the project, TERA digitized the pile driving records of 48 offshore platforms, including such information as blow counts, soil composition and pertinent construction details. In Phase II, the pile driving records were statistically compared with current methods of prediction. The result of the work was development of modular software that participating companies can use to evaluate other prediction procedures or other data bases.