

PROGRESS REPORT

COMPOSITIONAL AND MECHANICAL PROPERTIES
OF CARBONATE ROCKS

by

Donald L. Biggs
Department of Geology
Iowa State University
Ames, Iowa

Project HR-110

Submitted To

IOWA HIGHWAY RESEARCH BOARD

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This report briefly describes the progress of HR-110 of the Iowa Highway Research Board.

Referring to the specific aims in the Work Outline of this project, the state of completion is as follows:

1. **MINERALOGY:** The gross mineral content of samples from fifteen of the twenty-four quarries. Specific compositions of minerals differing from the norm is presently in work and is about forty per cent completed for these quarries.
2. **TEXTURE:** For the fifteen quarries in question, the texture studies are completed.
3. **GRAIN BOUNDARY STUDIES** are about fifty per cent completed on the fifteen quarries for which samples are available.
4. **PORE SYSTEM CHARACTERISTICS:** These studies have been started but no data is yet available.
5. **PERMEABILITY:** Studies are complete on the fifteen quarries for which samples are available.

6. SPECIFIC SURFACE STUDIES: Twelve of twenty-four quarries have been completed.

7. SPECIAL STUDIES: Additional studies on rocks from three quarries that promise to provide interesting comparison to rocks already studied have been begun. These have been, at the present, limited to thin section and X-ray studies.

The principal investigator is presently seeking promising ways to study the behavior of water in rocks during temperature and pressure variations and the interaction that such behavior has on the mineral constituents present.

Synthesis of the data for mineralogy, texture, permeability, and specific surface from twelve quarries is about seventy per cent completed.

It is expected that the next quarterly report will be submitted
30 June 1965.