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Commonwealth of Massachusetts
Department of Public Works
John A. Volpe, Commissioner

U. S. Department of the Interior
Geological Survey
W. E. Wrather, Director

✓
Cooperative Geologic Project

File Report

Geology and Geologic Interpretation of Seismic Data

for

Relocation of Route 2, Cut, Stations 250-266

in Athol, Mass.

by

C. R. Tuttle, Geologist, U. S. Geological Survey

2 pages of text
2 plates

Boston, Massachusetts
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Seismic Series # _____

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General Statement

Plans of the Massachusetts Department of Public Works for relocation of Route 2 in Athol, Mass. indicate a cut ranging from 26 feet deep on the base line to 46 feet deep at points 60 feet right (south) of the base-line. This study was made in March 1954 to obtain data on the probable depths to bedrock, and to determine the nature of the subsurface materials at this site.

Surface Geology

The base-line of the proposed highway traverses moderately compact ground moraine. Surface boulders that average 2 to 4 cubic yards in volume are particularly numerous between stations 257 and 259 and prevented satisfactory seismic data from being obtained. Bedrock is not exposed in the area shown on the plan accompanying this report, but it is probable that the bedrock of the area is a hard, crystalline granitic rock (Hardwick granite gneiss).

Subsurface Interpretation

Geologic sections as interpreted from seismic data are shown on sheet 2. Soil overlies bedrock to depths of 17 to 20 feet at shot points and is composed of a moderately compact till with a few boulders. The bedrock profile is generally parallel to surface topography.