54-192

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

Geologic and Seismic Investigations

for

Relocation of Route 8; Cut, Stations 0 - 18

in Sandisfield, Mass.

by

James E. Maynard, Geologist, U. S. Geological Survey

2 pages of text
3 plates

Boston, Massachusetts
December 1953.

Seismic Series #_____

Geologic and Seismic Investigations

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General Statement

In December 1952 preliminary geologic and seismic reconnaissances were made of this site. Six seismic profiles were made at this time and a report on this work was transmitted (See U.S. Geol Survey Open file report by James E. Maynard, ~~Geologist~~, and Russell F. Kaiser, Geologic and Investigations for relocation of route 8; Cut, Stations 1-18 in Sandisfield, Mass. with supplement by William R. ~~Seismologist (file report of February 1953)~~. The seismic data obtained at this Jr., released 5-11-53) time were derived from a continuous series of profiles approximately parallel to, and from 25 to 60 feet to the west of, the base line. These traverses explored the deepest part of the prospective cut, but did not furnish enough detailed information to permit sufficiently accurate estimates to be made of the quantities of materials to be excavated. This information required an additional, continuous series of seismic profiles made along the base line, and a series of single seismic profiles made across the base line at suitable intervals; this work was performed in August 1953 as part of a cooperative program of the United States Geological Survey and the Massachusetts Department of Public Works.

Mr. M. E. Chandler and Mr. W. L. Carney, Department of Public Works' Engineers, performed all pertinent survey work required for this project, and prepared the essential plans and profiles. Mr. Chandler also operated the seismic equipment and assisted in the preparation of the seismic velocity data.

Surface Geology

Information regarding the surface geology of this site can be found in the May, 1953 open file report ~~of February 1953 by Maynard and Kaiser~~.

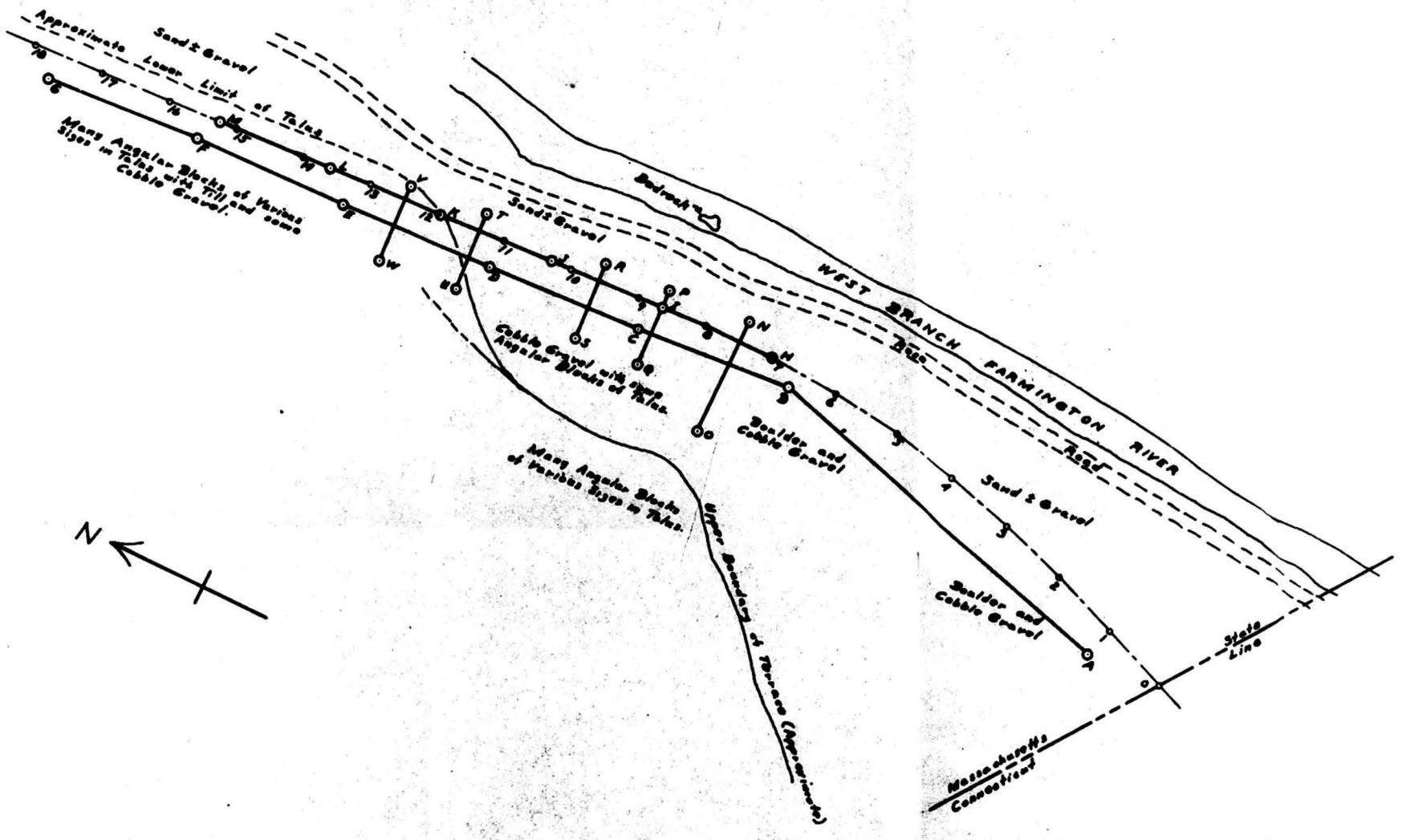
Seismic Traverses

Ten seismic traverses were made for this supplementary work. The locations of the shot points and the arrangement of the seismic lines are shown on sheet one.

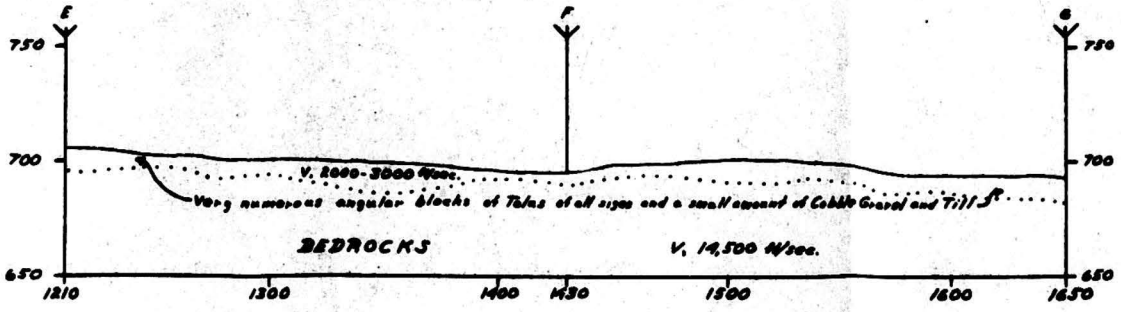
Subsurface Interpretation

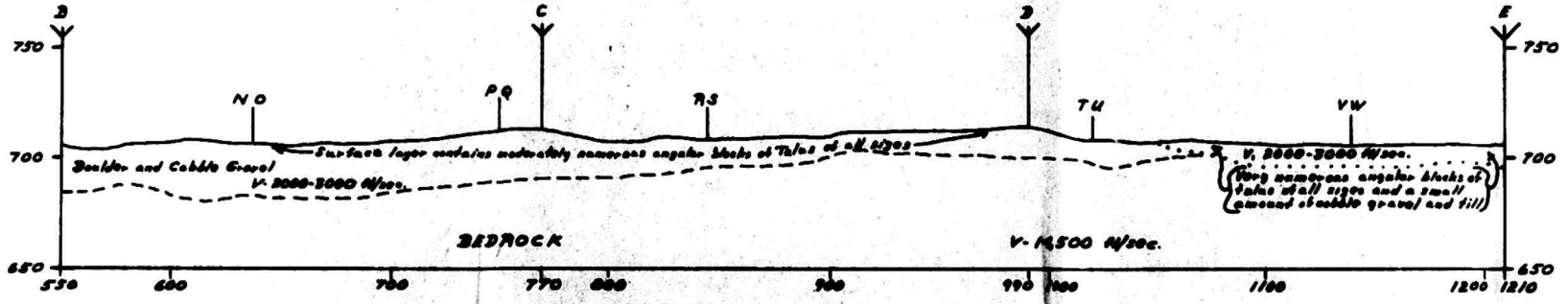
The geologic sections as interpreted from the surface geology and the seismic data are shown on sheets two and three. The bedrock profiles for sections L-M and W-V are shown by dotted lines because the seismic data for these sections were inconclusive.

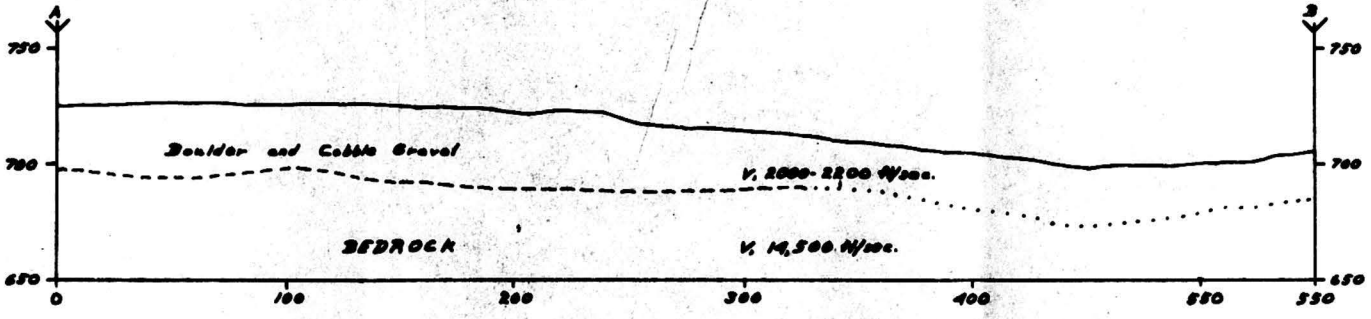
Because of the steep slopes, shallow depths to bedrock and the Heterogenseous nature of the surficial materials covering much of this site, interpretation of the bedrock surfaces was exceptionally difficult; consequently numerous small ridges, knobs and depressions may occur at altitudes both above and below the generalized bedrock surfaces shown on the sections.



COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS U.S. DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY COOPERATIVE GEOLOGIC PROJECT	PLAN OF TRAVERSES SCALE: 1 INCH = 100 FEET Letters refer to shot points at ends of traverses. Numbers refer to B.P.W. stations on baseline.	INTERPRETATIVE GEOLOGIC SECTIONS ALONG SEISMIC TRAVERSES ▼ Shot point. V – Apparent seismic velocity(ies) in feet per second. Dotted bedrock lines indicate inconclusive seismic data. Vertical measurements refer to elevations above mean sea level (datum 1929). Numerals at shot points indicate depths to bedrock, as	GEOLOGY BY: James F. Maynard SEISMIC DATA BY: James F. Maynard ENGINEERING BY: M. B. Chandler W. L. Carney	SANDISFIELD STATIONS 0+00 to 18+00 SCALE: 1 INCH = FEET	ROUTE NO. 8 DATE: Aug. 1953	SHEET 1 OF 3







COMMONWEALTH OF MASSACHUSETTS
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GEOLOGICAL SURVEY

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PLAN OF TRAVERSES

SCALE: 1 INCH = FEET

Letters refer to shot points at ends of traverses.

Numbers refer to D. P. W. stations on baseline.

INTERPRETATIVE GEOLOGIC SECTIONS ALONG SEISMIC TRAVERSES

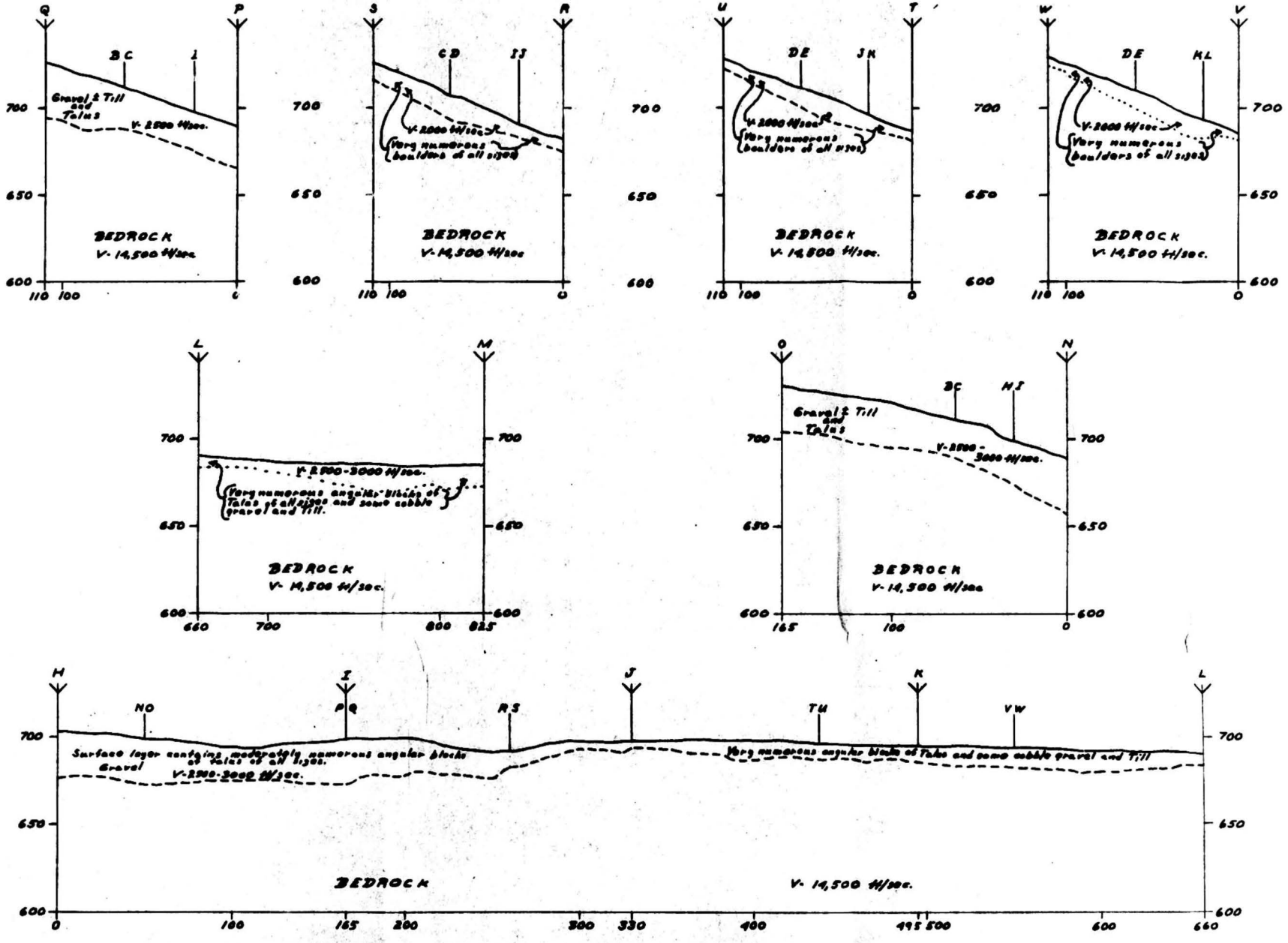
Shot point.
V = Apparent seismic velocity(ies) in feet per second.
Dotted bedrock lines indicate inconclusive seismic data.
Vertical measurements refer to elevations above mean sea level (datum 1929).
Numerals at shot points indicate depths to bedrock, as 24 and 10.

GEOLOGY BY: James E. Maynard
SEISMIC DATA BY: James E. Maynard
ENGINEERING BY: M. E. Chandler, W. L. Carney

SANDISFIELD — ROUTE NO. 8

STATIONS 0+00 TO 18+00

SCALE: 1 INCH = 40 FEET — DATE: Aug. 1953 — SHEET 2 OF 3



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SANDISFIELD

STATIONS 0+00 TO 18+00

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DATE: Aug. 1953

SHEET 3 OF 3