

The
University
of
Connecticut

STORRS, CONNECTICUT 06268

THE COLLEGE OF
LIBERAL ARTS AND SCIENCES
Department of Geology and Geophysics

July 5, 1978

Mr. Sidney Quarrier
Natural Resources Center
Department of Environmental Protection
State Office Building
Hartford, CT 06115

Dear Sid,

I'm enclosing a preliminary interpretation of the Hartford South Quadrangle along with the two previous maps by Weitz and Byrnes. The map is still preliminary because there are a number of areas where additional field work may be able to resolve some outstanding problems. The structural interpretation is largely based on a reexamination of the outcrops and minor faults in the southeast portion of the quadrangle.

Although the interpretation may look involved, principally because of the necessity to make it internally consistent, it differs significantly from the previous maps in only one respect—the orientation of the fault bounding the outcrops of Holyoke on I-91S. Since this basalt is cut and truncated by a few 070° faults I chose to carry these faults through the Little Brook valley where they also help to account for the rotation of the Vexation Mtn block. The evidence for the importance of these 070° faults is very persuasive in the SE part of the area where they definitely offset an important set of 020 faults. The age relation of the other main fault set which strikes about 140 is not clearly established but is shown on the present map as being cut by the 070 set. Considering the spatial distribution of these two fault sets and their relation to the Rocky Hill anticlinal feature I suspect they are about the same age and in all probability cut each other.

It will be obvious once you have studied the map there is a lot of room for argument especially in the Vexation Mountain area. This summer I intend to spend a few days in the field to resolve some of these problems if possible. Another high priority item this summer is to obtain sufficient chemical data to identify the basalt outcrops on I-91 mapped as Holyoke and the outcrops here mapped as Hampden on Hayes Road. Without this identification the interpretation of the geology in those areas is mere guesswork.

Mr. Sidney Quarrier

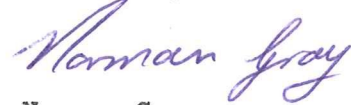
2

July 5, 1978

You will also note that all but the most speculative faults are not now marked with question marks even though most would merit such a designation. The final version will of course include such symbols.

Should any aspect of the interpretation bother you, I'd be willing to spell out the reasons, as I see them, either in writing or in person.

Sincerely,



Norman Gray

NG/hlr