IN REPLY REFER TO:
Geologic Division

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER 25, COLORADO

December 2, 1959

Mr. Grote Reber
Associated Universities
Green Bank, West Virginia

Dear Mr. Reber:

I have just read with interest your note in GSA Bulletin on the age of some of the lava flows on the southwest rift of Haleakala. It is a very good report on a set of interesting observations.

I am a geologist who has spent all of his active career in the study of volcanic rocks, 15 years of it in the Hawaiian Islands. I was living on Maui in the 1930's, including the time of the 1938 earthquake. I was very actively concerned in all the results of that quake. It is my considered opinion that no part of the Pimoe lava could have been erupted in 1938, nor related in any way to the earthquake. This opinion is founded on a number of lines of evidence that I'll not go into unless you are interested.

If the opinion is correct, then some explanation is required for the C_{14} age of the sample of charcoal from the Pimoe flow. One possible explanation occurs to me, i.e., that the charcoal was young vegetation and not part of growth that existed prior to the flow. I have seen many tree and root molds in lava in many different places that are partly to completely filled by modern vegetation. If this modern vegetation were burned, and the part occupying the pre-existing mold were carbonized (which it probably would be), I wonder what sort of criteria could be used to tell it from vegetation that had been carbonized by the lava at the time a mold was formed. You may have some observations that would apply to this question.

You speak of the presence of large trees on the higher slopes of this region in the past, as evidenced by the large tree molds. It may interest you to know that dense forest in this same region is reported by the government surveyors who worked in this area on the government land surveys as recently as 1850. The forest has been destroyed by cutting and other activities of modern civilization.

I am much interested in any comments you may care to make on my query.

Sincerely yours,

Howard A. Powers

Howard A. Powers, Geologist
Engineering Geology Branch