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CRMO Geology

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Department of Geological Sciences

October 15, 1969

Mr. Dennis Carter, Chief Naturalist
Craters of the Moon National Monument
P. O. Box 29
Circo, Idaho 83213

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Dear Mr. Carter:

I have been tardy in writing to you to thank you for your assistance and cooperation in our work at "The Craters" last summer. Certainly you made it a pleasant and enjoyable experience.

I have just written Mr. Fritz concerning the results of our radiocarbon dating, and I would like to also report our results to you.

I have just received a report from the Radiocarbon Laboratory on our samples from "The Craters". We submitted four samples and have received reports on three of them. You may recall that the charcoal rootlets were quite small and it required considerable effort to obtain enough for a suitable sample. However, our samples were adequate and we feel that we have a valid age determination. The two most reliable samples gave the following:

No. 1 - 2110 ± 90 years

No. 2 - 2050 ± 80 years

The average of these two is 2080 ± 85 years.

This is, of course, the date for the particular flow which produced the carbonized rootlets. However, we know that this is not the most recent flow and very likely it is not the oldest one. We feel, however, that it is probably one of the late flows. Actual mapping should be done to establish the relationship of the "dated" flow to other flows, such as the Serrate flow. We would also wish to try to date the earliest activity

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in the area as well as the latest activity. We have assumed that the development of a volcanic field such as "The Craters" covered a considerable span of time, perhaps some thousands of years. This may or may not be true. I feel that we have a start and have established the fact that valid radiocarbon dates can be obtained for this area. However, much more work is necessary before we know the full history of this area.

The fourth radiocarbon sample which is now being run was black soil in which we obtained the rootlets. I am eager to learn the results and if they check with the other samples it will greatly simplify the task of collecting suitable material for age determinations.

Don is working on the map of the "Great Rift" and studying the rock samples which we collected. We will keep you informed from time to time of the progress in our study.

I watch the weather reports with a renewed interest in Southern Idaho. I am confident that the mountains must now have snow and that winter is not far away.

Please give my regards to members of the staff, and with best wishes I am

Sincerely,



Fred M. Bullard
Professor of Geology

FMB:ss