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Rocky Mountain Section - 68th Annual Meeting - 2016

Paper No. 10-6

Presentation Time: 8:00 AM-6:00 PM

TEPHROSTRATIGRAPHY STUDIES AT KINGS BOWL, CRATERS OF THE MOON NATIONAL MONUMENT AND PRESERVE

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The Kings Bowl pit was formed by a phreatic blast through a solidifying lava lake at Craters of the Moon National Monument and Preserve, Idaho, around 2000 years ago. The blast produced a tephra deposit that was carried eastward by the wind, leaving only ballistic ejecta on the west side of the blast site. In the summer of 2015 we conducted a tephrostratigraphic study of the deposits to evaluate the style of the blast in conjunction with the NASA FINESSE project. Data was obtained by digging holes and recording the depth, collecting samples from the inside wall of the hole, and recording any in situ tephrostratigraphy. Bioturbation caused by sagebrush resulted in only one hole showing preserved tephrostratigraphy for two fall units. Therefore the rest of the holes were reported as bulk, the result of mixing of an unknown number of units. Not only was there extensive bioturbation, there was also extensive eolian dust. Isopach and isopleth maps of the tephra deposit support the hypothesis that there were at least three blasting events. This indicates that the phreatic blasts at Kings Bowl were more complex than previously recognized.

Session No. 10--Booth# 30

[T13. Cenozoic Volcanism in the Inland Northwestern United States \(Posters\)](#)

Wednesday, 18 May 2016: 8:00 AM-6:00 PM

Clearwater Room (Idaho Commons Conference Center)

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