

TITLE: **The Ongoing Investigations of The Devil's Wood Yard Mud Volcano.**

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This project is an ongoing one focused on continuous annual monitoring of the Devil's Wood yard. It is based on determining the nature of the subsurface using geophysical techniques i.e. Seismic Refraction and D.C Electrical Resistivity. It is also based on investigating the mineralogy of the extruded mud using X- ray diffraction and observations of the surface indicators in terms of the number and configurations of major and minor vents present and changes in the topography on the area under investigation.

Both geophysical techniques used provided detailed information on the nature of the subsurface. The seismic refraction geophysical technique provided information on the number of layers present in the subsurface. It also provided information on the classification of materials present in the subsurface from the seismic velocities obtained. The seismic velocities obtained were then used to determine the depth/thickness of the upper layer of the subsurface. The resistivity technique using the Schlumberger arrangement gave a vertical profile of the subsurface. This profile showed a variation in the resistivity with depth due to variation in water content with depth below the surface. The X- ray diffraction was used to determine the mineralogy of the extruded mud. The major minerals obtained were Mica, Kaolinite, Quartz and Montmorillonite.

The results obtained from this year's project were compared with the observations obtained over the several years of investigation.