

TITLE: The Geophysical Characteristics of the Devil's Woodyard Mud Volcano

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This project is a continuation of an ongoing study carried out by the Department of Physics, University of the West Indies; St Augustine. This study involved the use of surface geophysical investigation techniques to determine the subterranean characteristics of the mud volcano at The Devil's Woodyard. The geophysical methods employed were seismic refraction and electrical resistivity.

Results of a recent study carried out in 2006, showed that an eruption had occurred and the *tassik* had risen, showing large, visible cracks and faulting, along with disruption of the strata beneath. Present observation showed a severe undulating area to the west of the *tassik*. However, erosion mainly by rainfall had degraded that area and distributed the mud more evenly over time.

The investigation reveals that some layering was present but with intruded material between distinct layers. Relatively lower values of electrical resistivity indicated the presence of a slurry chamber in the subsurface.

Two laboratory tests, X-ray Diffraction and Thermal Conductivity were carried out which determined the mineralogical characteristics of the extruded material. It was found that kaolinite was the major constituent along with minor amount of other materials.