ABSTRACT NO.: 584

TITLE: Ongoing Monitoring of the Piparo Mud Volcano

AUTHORS: Nicholette Camps (807000651)
          Hannah Ramsingh (806003141)
          Garth Mannette (02713362)
          Nisha Ali (806001304)
          Rafi Kurban (807000448)
          Rehana Mohammed (806003608)

SUPERVISORS: Dr. R. Clarke
             Dr. J.C. Knight

When the Piparo mud volcano erupted on 22nd February, 1997, it violently spewed large masses of rock hundreds of feet into the air and widely scattered over the country side. The disaster caused distress as villagers were forced to evacuate their homes and business places, thus leaving a much felt economic wound. Activity at the volcano has since been monitored on an annual basis by the Department of Physics, University of the West Indies, St. Augustine Campus. This year’s research project is a continuation, employing geophysical techniques (seismic refraction, electrical resistivity profiling and, for the first time, magnetometry) to probe the sub surface.

Compared to 2009, visible surface indicators (vents) showed that there was an increase in the number of new vents in the north-western and south-eastern sectors, with a decrease in the north-eastern sector. There was also an increase in vegetation, encroaching upwards from the base, on the flanks of the tassik. This may be expected, given the decrease in alkalinity over time, more so away from the immediate vicinity of the vents. Compared with data from previous years, X-ray diffraction analysis showed no significant change in the mineralogy of the effluents.