Geophysical Research Abstracts,
Vol. 10, EGU2008-A-05524, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-05524
EGU General Assembly 2008

Volcanic eruption prediction – 5 years before the event

H. Rymer (1), C.A Locke (2), A. Borgia (1), M. Martinez (3) and J.Brenes (3)

(1) Dept. Earth & Environmental Sciences, The Open University, Walton Hall, Milton Keynes, Bucks, MK7 6AA. UK, (2) Dept. Geology, The University of Auckland, Private Bag 92019, Auckland, New Zealand, (3) Observatorio Vulcanologico y Sismologico de Costa Rica, Universidad Nacional (OVISCORI-UNA), Apartado 86-3000, Heredia, Costa Rica (h.rymer@open.ac.uk)

The shallow sub-surface structure of Poás volcano, Costa Rica has been described previously as comprising a hydrothermal zone beneath the present crater that gives way at depths of ca. 500 m to a magmatic region. The top of the magmatic region is thought to be capped by a frozen, but fractured carapace. Periodic bursts of volatile rich magma escape through these fractures and form dendritic intrusions reaching shallow levels immediately beneath the crater floor. By considering data from a variety of independent observations, we now propose a more detailed interpretation of this shallow structure and its evolution over the past 30 years. Some trends in the gravity data suggest that distinctive signals may be seen up to 5 years before the onset of renewed phreatic activity.