



**NSF Award Abstract -
#0405524**

**Collaborative Research - Resolution of the
Stratigraphic Record for a High Input,
Collision-Margin Shelf Basin: The MARGINS
Waipaoa Focus Area**

NSF Org OCE

Latest Amendment Date July 23, 2004

Award Number 0405524

Award Instrument Standard Grant

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OCE Division of Ocean
Sciences
GEO Directorate for
Geosciences

Start Date August 1, 2004

Expires July 31, 2007 (Estimated)

Awarded Amount to Date \$266452

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**NSF Program(s) MARINE GEOLOGY AND
GEOPHYSICS**

Field Application(s) 0204000 Oceanography

Program Reference Code(s) OTHR,1620,0000

Program Element Code(s) 1620

Abstract

The major objective of this study is to determine the nature and resolution of the Mid-Late Holocene marine stratigraphic record found in the shelf basin off the Waipaoa with respect to land use and oceanographic/climate changes. The proponents suggest that the shelf basin mud deposit will prove useful in recording well-documented changes in the adjacent terrestrial environment, including a remarkable 2250-year record of major flood events from lake records, as well as Mid-Holocene and Historical perturbations in sediment input, driven by ENSO, volcanism, tectonics and European deforestation. To extract this information, the PIs will conduct high-resolution (Chirp) reflection and sidescan surveys of the Waipaoa shelf mud deposit, along with targeted vibra-coring efforts to determine the Holocene stratigraphic record of the deposit. Surface sediment will be collected with box and kasten cores to compare historical sediment dispersal patterns with those that dominate over longer (Holocene) timescales.

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