NSF Award Abstract - #0305779

Collaborative Research: Developing a Quantitative Understanding of Clinoform Formation, Gulf of Papua

NSF Org	OCE
Latest Amendment Date	May 19, 2003
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Award Instrument	Standard Grant
Program Manager	Rodey Batiza OCE DIVISION OF OCEAN SCIENCES GEO DIRECTORATE FOR GEOSCIENCES
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Expected Total Amount	$178842 (Estimated)
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Sponsor	U of Cal SD Scripps Inst 9500 Gilman Drive La Jolla, CA 92093 858/534-1293
NSF Program	1620 MARINE GEOLOGY AND GEOPHYSICS

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Abstract

This is a project to study the processes of sediment transport and accumulation that lead to development of the clinoforms on the Gulf of Papua (GoP) continental shelf. Shelf clinoforms are the dominant components of continental-margin stratigraphy, but little is known about the processes that create them. By combining field research (seismic profiling and piston coring) and numerical modeling, quantitative understanding of mid-shelf clinoform development at geologic time scales can be developed. These studies will test the hypothesis that the predominant mechanism for creating the present-day clinoform morphology is across-shelf gravity flow of fluid muds, whereas underlying strata may have formed in different conditions in response to changing rates of sea-level rise and sediment supply.
