PACIFIC COASTAL & MARINE SCIENCE CENTER
SAMPLE REQUEST FORM

Mail to the Pacific Coastal & Marine Science Center Core Curator,
U.S. Geological Survey,
345 Middlefield Road, MS-999, Menlo Park, CA, 94025;
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Date of Request: October 3, 2012
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Same

Funding agency or institution: USGS

National Program: USGS Eastern Geology and Paleoclimate Science Center

Collaborators:
Thomas Cronin, USGS Eastern Geology and Paleoclimate Science Center

Project summary: The terrestrial paleoenvironments that now occupy regions of the Chukchi shelf are poorly understood, and the timing of the transgression with rising sea level at the end of the last glacial maximum are not well constrained. The buried terrestrial peat deposits, as well as the overlying Holocene marine sediments in these cores, are an important archive for achieving a better understanding of the impacts of the terrestrial environment on the global carbon cycle during deglaciation. These cores may help constrain the timing of the opening of the Bering Strait, which has major implications for ocean and atmospheric circulation, sea ice cover, and nutrient delivery to the Arctic Ocean.

Potential impacts, major products, and timelines: Describe expected outcomes. What products will you produce to contribute to the desired outcomes? When do you expect to publish data based on these samples?

The transect of cores from the Chukchi Shelf will help improve on existing maps on the marine transgression during the last deglaciation. Our work will result in digital photographs and measured sections of the cores (which will be provided to PCMSC for inclusion in Infobank), and geochronologic data on the Pleistocene and Holocene sections. We expect to have all analyses completed by September 30, 2013 and to publish multiple papers summarizing the results within 2-3 years of completion. This work will result in at least 2 peer-reviewed manuscripts as well as a USGS Open-file report that will include new radiocarbon age constraints on the terrestrial deposits.

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Name: __Miriam Jones_

Field Activity ID	Core ID	Section	Half (W/A)	Interval Top	Interval Bottom	Volume (cm^3)	Comments
D-1-85-AR	C-51	Pleistocene/ Holocene	W	0	3 m	5	Digital photos
D-1-85-AR	C-54	*	W	0	3m	*	*
D-1-85-AR	C-56	*	W				
D-1-85-AR	C-58	*	W	0	3m	*	*
D-1-85-AR	61	*	W	0	3m	*	*
D-1-85-AR	62	*	W	0	3m	*	*
D-1-85-AR	65	*	W	0	3m	*	*
D-1-85-AR	66	*	W	0	3m	*	*
D-1-85-AR	67	*	W	0	3m	*	*

* We intend to sample the cores for the following analyses IF appropriate lithologies are present: terrestrial plant macrofossils and marine bivalves for radiocarbon dating. It is not possible to specify core depths for sampling - or even the number of samples - until we see and describe the core, so I have listed the high priority cores and simply generalized the core depth intervals of interest.

We intend to sample primarily from the working half of cores, but would like to be able to sample the archive half if insufficient material is available in the working half.