

**Collaborative Research: Investigation of Paleoenvironment, Geomorphic Processes, and Carbon Stocks of Drained Thaw-Lake Basins, Arctic Coastal Plain, Alaska. OPP-9911122 and 0240174**

**Collaborative Research: Spatial and Temporal Variability of Ground Temperature and Thaw, Northern Alaska OPP-0094769 and 0095088**

**Response of the Global Active Layer-Permafrost System to Climate: CALM - The Circumpolar Active Layer Monitoring Program OPP-9732051**

DATE: 4/28/03

TO: ARCSS Investigators and Program Managers, NSF

FROM: Wendy Eisner, Jim Bockheim, Ken Hinkel and Fritz Nelson

RE: April 2003 Field Activities

This report briefly describes our spring field season, which took place from April 12 to April 23, 2003. The field team consisted of Wendy Eisner, Ken Hinkel, graduate student Ben Jones (University of Cincinnati), Jim Bockheim and graduate student Kevin Masarik (University of Wisconsin), Fritz Nelson (University of Delaware), John Kimble (NRCS-USDA), and Eddie Cummings (USDA-NRCS-NSSC from Gainesville, FL).

We visited a total of 5 thaw lake basins within a 20 km radius of Barrow. The basins were selected based on their relative age, which was determined using Landsat 7+ imagery and the degree of basin polygonization. We used several sampling schemes designed to develop a clearer picture of the basin stratigraphy and carbon amounts. We also visited 6 sites within a 35 km radius of Barrow which appears to never have been impacted by the thaw lake cycle.

The sites were accessed by snow machines, which were used to transport a Big Beaver drill mounted on a snow machine sled. We collected a total of 42 cores, which were transported to laboratory facilities at BASC/NARL where we described and photographed them. A subset of these were subsampled for pollen and radiocarbon dating. Five of the cores were sectioned into 10-cm segments, weighed, and oven-dried the samples for transport to the home institutes (University of Wisconsin and University of Cincinnati) where they are being analyzed for organic C, other key morphological and chemical properties, and soil texture.

Snow depth on the Barrow ARCSS/CALM grid averaged 30 cm, which was the same as last year but substantially below the 40 cm averaged over the period 1995-2001. The drift that developed behind the snow fence along Cakeater Road had similar height and width as the lee drift last year.

We had several fruitful meetings with BASC personnel to plan our upcoming August field work in Barrow and Atqasuk.

As always, BASC personnel were extremely helpful in arranging logistical support.

Web page: <http://www.gissa.uc.edu/~weisner/april03photos>