


# ANCIENT BOWHEAD WHALE BLUBBER FROM GAMBELL ALASKA



Sampling the ancient blubber from Gambell in the laboratory at the Dept of Wildlife Management in Barrow.



**BETA ANALYTIC INC.**  
DR. M.A. TAMERS and MR. D.G. HOOD


UNIVERSITY BRANCH  
4985 S.W. 74 COURT  
MIAMI, FLORIDA, USA 33155  
PH: 305/667-5167 FAX: 305/663-0964  
E-MAIL: beta@radiocarbon.com

### REPORT OF RADIOCARBON DATING ANALYSES

Mr. J. C. George Report Date: 1/16/2006  
North Slope Borough Material Received: 12/5/2005

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 211334 SAMPLE : GAMBELL AUG 05 ANALYSIS : Radiometric-Standard delivery MATERIAL/PRETREATMENT : (blubber): none 2 SIGMA CALIBRATION : Cal AD 790 to 1050 (Cal BP 1160 to 900) AND Cal AD 1100 to 1140 (Cal BP 850 to 810)	1030 +/- 70 BP	-22.5 o/oo	1070 +/- 70 BP

Radio-carbon age estimate from the radiocarbon. Note that both indicate the blubber is over 1000 years old.



In August 2005, Douglas Henry of Gambell Alaska, found a section of bowhead blubber about 12 feet underground. He excavated the *mangtak*, as he recognized that it was in a very old ice cellar and quite unique. The blubber was given to biologist Craig George, who was in Gambell working with Merlin Koonooka sampling bowhead skulls as part of a bowhead whale “stock structure” DNA study. The purpose was to determine if whales harvested at St. Lawrence Island might be genetically different from those taken at Barrow.

Sections of the old blubber were sent out to laboratories for analysis of age, contaminants, and fats. Information from this specimen should give scientists baseline information to compare to modern whales.

The estimated age of the sample was about 1,050 years old ( $\pm 70$  yr). These results need further checking since marine environments affect carbon dating. Regardless, it is safe to say that this maktak is remarkably old. In fact, this sample likely represents some of the oldest blubber ever collected and analyzed. People of Gambell were excited because this helps confirm what they have always said - that they have hunted whales for thousands of years.

The Wildlife Department is waiting on analyses on the contaminants and fats. An update will be sent out as further information arrives. (Note: Craig did taste the *mangtak* and would not recommend it for dinner). We thank the Gambell residents for offering this specimen for science.

*J. Craig George - The North Slope Borough Department of Wildlife Management*



Skull of a whale at Gambell harvested within the last 30 years. Useful DNA was extracted from the bone for the stock structure study.