Date: Tue, 21 Oct 1997 10:16:30 +0000
From: beta@analytic.win.net (Beta Analytic Inc.)
To: nicholson@BrandonU.CA
Reply-to: beta@analytic.win.net (Beta Analytic Inc.)
MIME-version: 1.0

Sending E-mail beta@analytic.win.net
Receiving E-mail nicholson@brandonu.ca

THIS IS A COPY OF THE REPORT MAILED TO YOU TODAY. CALENDAR CALIBRATIONS ARE NOT INCLUDED.

Dear Dr. Nicholson:

Please find enclosed the radiocarbon dating results for one bone and one organic sediment samples (FSH #1 and 2) which were submitted on September 19. The sediment was large enough for radiometric counting. The bone was extremely small and required direct atomic counting using an AMS. The method used for each sample is designated on the report sheet along with the results. All analytical steps went normally. The quoted errors represent 1 sigma statistics. Since these errors cannot include uncertainties outside of those which can be quantified during measurement, it is best to consider them as minimum quotes.

I notice the sediment date is much younger than expected. As discussed in the PRETREATMENT GLOSSARY, it may imply the date is a minimum (i.e. at least this old). The open nature of organic sediments, plus the limited ability to pretreat them introduces this kind of subjectivity.

Literature discussing the generalities of analysis and calendar calibration are enclosed. The "Analytical Procedures and Final Report" discussion should answer most questions about the report and results. If you have any specific questions, please do not hesitate to contact us.

Our invoice has been sent separately. A copy is enclosed. Thank you for your prior efforts in arranging payment.

Darden Hood
Co-director

DATING RESULTS:

Dr. B. A. Nicholson
September 19, 1997

Brandon University October 20, 1997

Sample Data	Measured	C13/C12	Conventional
	C14 Age	Ratio	C14 Age (*)
Beta-109529	3230 +/- 70 BP	-23.8 o/oo	3250 +/- 70 BP

SAMPLE #: FSH #1
ANALYSIS: radiometric-standard
MATERIAL/PRETREATMENT:(organic sediment): acid washes
COMMENT: low carbon sediment requiring special handling

Beta-109530 5250 +/- 50 BP -18.7 o/oo 5350
+/- 50 BP

SAMPLE #: FSH #2
ANALYSIS: Standard-AMS
MATERIAL/PRETREATMENT:(bone collagen): collagen extraction with
alkali

NOTE: It is important to read the calendar calibration
information
and to use the calendar calibrated results (reported separately)
when
interpreting these results in AD/BC terms.

Dates are reported as RCYBP (radiocarbon years before present,
"present"= 1950A.D.). By international convention, the modern
reference standard was 95% of the C14 content of the National
Bureau
of Standards' Oxalic Acid & calculated using the Libby C14 half
life (5568 years). Quoted errors represent 1 standard deviation
statistics (68% probability) & are based on combined measurements
of
the sample, background, and modern reference standards. Measured
C13/C12
ratios were calculated relative to the PDB-1 international
standard and the
RCYBP ages were normalized to -25 per mil. If the ratio and age
are
accompanied by an (*), then the C13/C12 value was estimated,
based on values typical of the material type. The quoted results
are NOT calibrated to calendar years. Calibration to calendar
years should be calculated using the Conventional C14 Age.

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! BETA ANALYTIC, INC !Tel. 305-667-5167 !
! 4985 SW 74TH COURT !FAX 305-663-0964 !
! MIAMI, FL 33155 !E-mail beta@analytic.win.net !
! ! !
!!!

To: shamilto@mist.Lakeheadu.Ca
From: Bev Nicholson <Nicholson@BrandonU.CA>
Subject: Re: BETA ANALYTIC: Flint Stone Hill.
Cc:
Bcc:
X-Attachments:

I dunno Scott . . . . . Garry is going to be disappointed, I think. Please get back to me on this.
Regards, Bev

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Darden Hood
Co-director

DATING RESULTS:

Dr. B. A. Nicholson
Brandon University

Post-it™ Fax Note 7671E | Date | # of pages ▸
To Dr. Garry Running | From Dr. Bev Nicholson
Co./Dept. Geography UWEC | Co. Brandon University
Phone # (715) 836-2731 | Phone # (204) 727-9752
Fax # (715) 836-6027 | Fax #

ƒƒ

Sample Data	Measured C14 Age	C13/C12 Ratio	Conventional C14 Age (*)
Beta-109529	3230 +/- 70 BP	-23.8 o/oo	3250+/- 70 BP

SAMPLE #: FSH #1
ANALYSIS: radiometric-standard
MATERIAL/PRETREATMENT:(organic sediment): acid washes
COMMENT: low carbon sediment requiring special handling

Beta-109530 5250 +/- 50 BP -18.7 o/oo 5350+/- 50 BP

SAMPLE #: FSH #2
ANALYSIS: Standard-AMS
MATERIAL/PRETREATMENT:(bone collagen): collagen extraction with alkali

NOTE: It is important to read the calendar calibration information and to use the calendar calibrated results (reported separately) when interpreting these results in AD/BC terms.

Dates are reported as RCYBP (radiocarbon years before present, "present"= 1950A.D.). By international convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards. Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 Age.


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! BETA ANALYTIC, INC         !Tel. 305-667-5167             !
! 4985 SW 74TH COURT         !FAX  305-663-0964             !
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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

FOR: Dr. B. A. Nicholson
Brandon University

DATE RECEIVED: September 19, 1997
DATE REPORTED: October 20, 1997

Sample Data	Measured C14 Age	C13/C12 Ratio	Conventional C14 Age (*)
Beta-109529	3230 +/- 70 BP	-23.8 o/oo	3250 +/- 70 BP

SAMPLE #: FSH #1
ANALYSIS: radiometric-standard
MATERIAL/PRETREATMENT:(organic sediment): acid washes
COMMENT: low carbon sediment requiring special handling

Beta-109530	5250 +/- 50 BP	-18.7 o/oo	5350 +/- 50 BP

SAMPLE #: FSH #2
ANALYSIS: Standard-AMS
MATERIAL/PRETREATMENT:(bone collagen): collagen extraction with alkali

NOTE: It is important to read the calendar calibration information and to use the calendar calibrated results (reported separately) when interpreting these results in AD/BC terms.

Dates are reported as RCYBP (radiocarbon years before present, "present" = 1950A.D.). By International convention, the modern reference standard was 95% of the C14 content of the National Bureau of Standards' Oxalic Acid & calculated using the Libby C14 half life (5568 years). Quoted errors represent 1 standard deviation statistics (68% probability) & are based on combined measurements of the sample, background, and modern reference standards.

Measured C13/C12 ratios were calculated relative to the PDB-1 international standard and the RCYBP ages were normalized to -25 per mil. If the ratio and age are accompanied by an (*), then the C13/C12 value was estimated, based on values typical of the material type. The quoted results are NOT calibrated to calendar years. Calibration to calendar years should be calculated using the Conventional C14 age.

Flint Stone 14,11

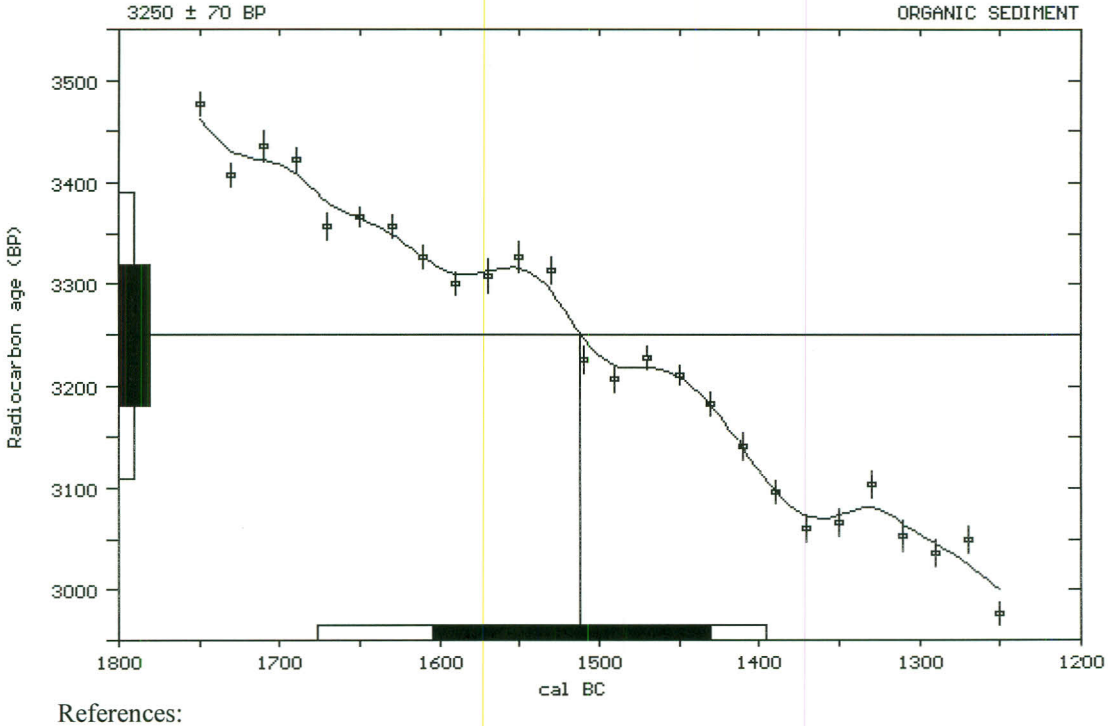
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-23.8:lab. mult=1)

Laboratory Number:	Beta-109529
Conventional radiocarbon age:	**3250 ± 70 BP**
Calibrated results: (2 sigma, 95% probability)	**cal BC 1675 to 1395**

Intercept data:

Intercept of radiocarbon age with calibration curve:	cal BC 1510
1 sigma calibrated results: (68% probability)	cal BC 1605 to 1430



References:

Pretoria Calibration Curve for Short Lived Samples
Vogel, J. C., Fuls, A., Visser, E. and Becker, B., 1993, Radiocarbon 35(1), p73-86

A Simplified Approach to Calibrating C14 Dates
Talma, A. S. and Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

Calibration - 1993
Stuiver, M., Long, A., Kra, R. S. and Devine, J. M., 1993, Radiocarbon 35(1)

Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 ■ Tel: (305)667-5167 ■ Fax: (305)663-0964 ■ E-mail: beta@radiocarbon.com

Flint Stone Hill

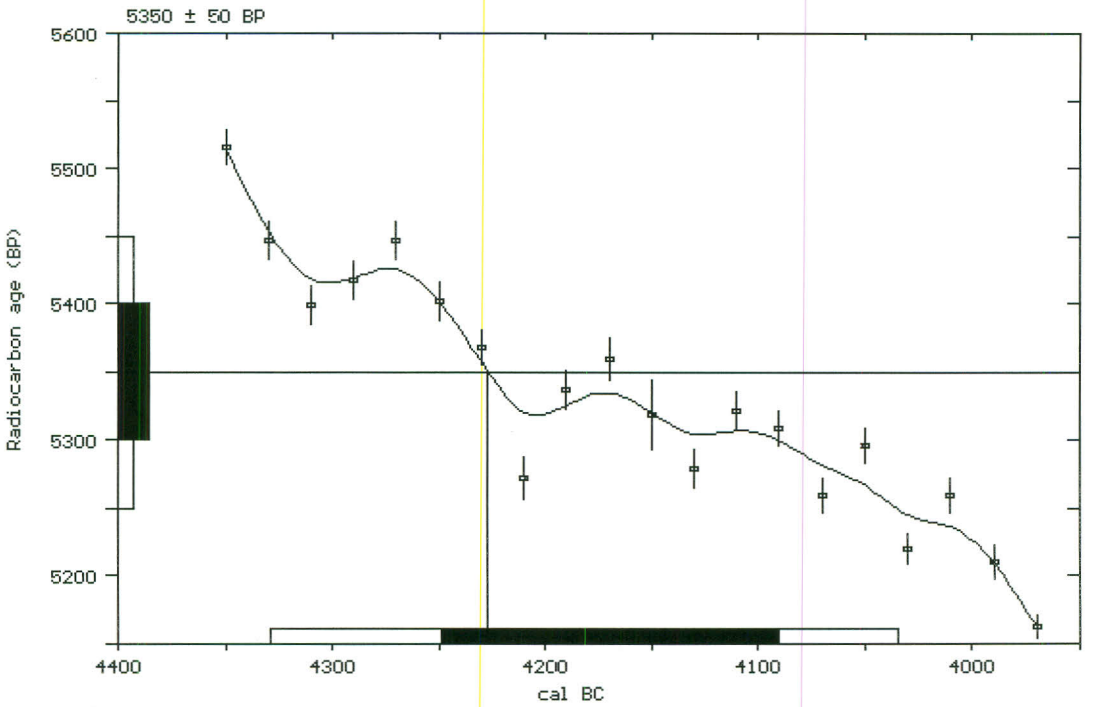
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables:C13/C12=-18.7:lab mult.=1)

Laboratory Number:	Beta-109530
Conventional radiocarbon age:	**5350 ± 50 BP**
Calibrated results: (2 sigma, 95% probability)	**cal BC 4330 to 4035**

Intercept data:

Intercept of radiocarbon age with calibration curve:	cal BC 4225
1 sigma calibrated results: (68% probability)	cal BC 4250 to 4090



References:

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