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November 2, 2015

Dr. Mary Beth Trubitt
Henderson State University
Arkansas Archaeological Survey
P.O. Box H-7841
Arkadelphia, AR 71999

RE: Radiocarbon Dating Result For Sample 2014-336-62

Dear Dr. Trubitt:

Enclosed is the radiocarbon dating result for one sample recently sent to us. As usual, specifics of the analysis are listed on the report with the result and calibration data is provided where applicable. The Conventional Radiocarbon Age has been corrected for total fractionation effects and where applicable, calibration was performed using 2013 calibration databases (cited on the graph pages).

The web directory containing the table of results and PDF download also contains pictures, a cvs spreadsheet download option and a quality assurance report containing expected vs. measured values for 3-5 working standards analyzed simultaneously with your samples.

The reported result is accredited to ISO/IEC 17025:2005 Testing Accreditation PJLA #59423 standards and all pretreatments and chemistry were performed here in our laboratories and counted in our own accelerators here in Miami. Since Beta is not a teaching laboratory, only graduates trained to strict protocols of the ISO/IEC 17025:2005 Testing Accreditation PJLA #59423 program participated in the analysis.

As always Conventional Radiocarbon Ages and sigmas are rounded to the nearest 10 years per the conventions of the 1977 International Radiocarbon Conference. When counting statistics produce sigmas lower than +/- 30 years, a conservative +/- 30 BP is cited for the result. The reported d13C was measured separately in an IRMS (isotope ratio mass spectrometer). It is NOT the AMS d13C which would include fractionation effects from natural, chemistry and AMS induced sources.

When interpreting the result, please consider any communications you may have had with us regarding the sample. As always, your inquiries are most welcome. If you have any questions or would like further details of the analysis, please do not hesitate to contact us.

Our invoice has been sent separately. Thank you for your prior efforts in arranging payment. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,



Darden Hood

Digital signature on file



REPORT OF RADIOCARBON DATING ANALYSES

Dr. Mary Beth Trubitt

Report Date: 11/2/2015

Henderson State University

Material Received: 10/23/2015

Sample Data	Measured Radiocarbon Age	d13C	Conventional Radiocarbon Age(*)
Beta - 422032 SAMPLE : 2014-336-62 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1445 to 1635 (Cal BP 505 to 315)	120 +/- 30 BP	-9.8 o/oo	370 +/- 30 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "**". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12 = -9.8 o/oo : lab. mult = 1)

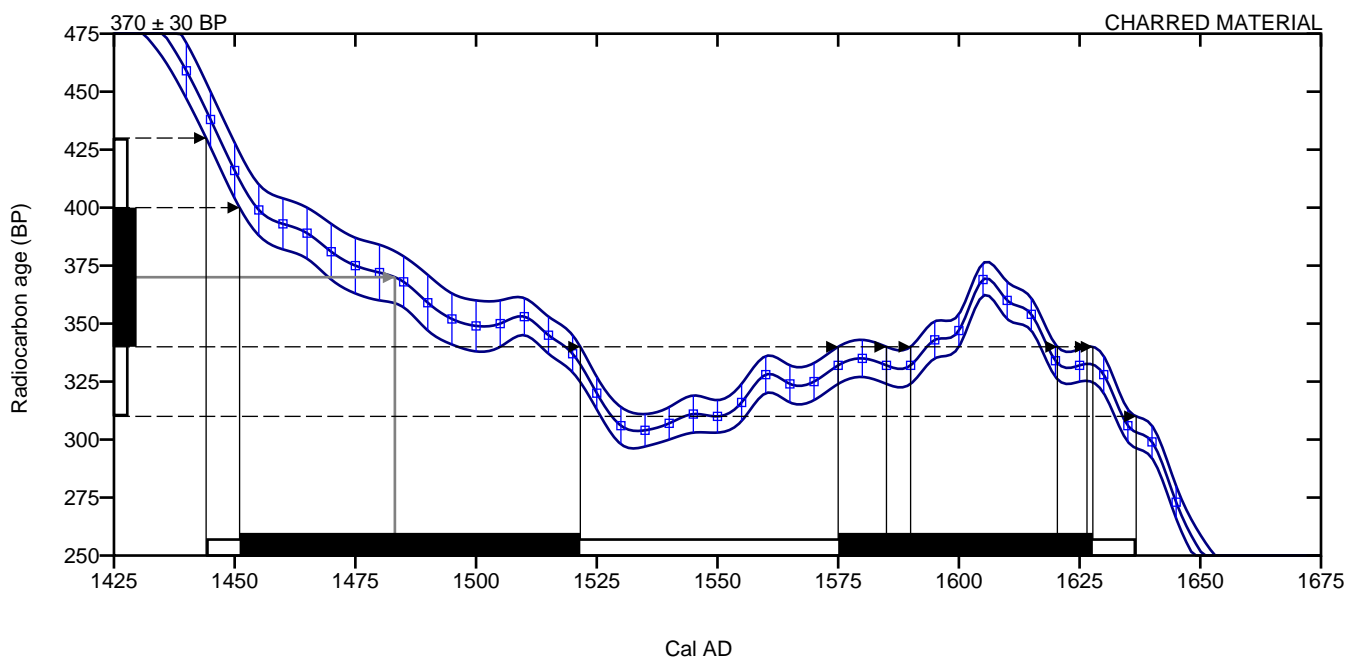
Laboratory number **Beta-422032 : 2014-336-62**

Conventional radiocarbon age **370 ± 30 BP**

Calibrated Result (95% Probability) **Cal AD 1445 to 1635 (Cal BP 505 to 315)**

Intercept of radiocarbon age with calibration curve Cal AD 1485 (Cal BP 465)

Calibrated Result (68% Probability) Cal AD 1450 to 1520 (Cal BP 500 to 430)
Cal AD 1575 to 1630 (Cal BP 375 to 320)



Database used
INTCAL13

References

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates, Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

References to INTCAL13 database

Reimer PJ et al. IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP. Radiocarbon 55(4):1869– 1887., 2013.

Beta Analytic Radiocarbon Dating Laboratory

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The Radiocarbon Laboratory Accredited to ISO/IEC 17025:2005 Testing Accreditation PJLA #59423

Quality Assurance Report

This report provides the results of reference materials used to validate radiocarbon analyses prior to reporting. Known value reference materials were analyzed quasi-simultaneously with the unknowns. Results are reported as expected values vs measured values. Reported values are calculated relative to NIST SRM-4990B and corrected for isotopic fractionation. Results are reported using the direct analytical measure percent modern carbon (pMC) with one relative standard deviation.

Report Date: November 02, 2015
Submitter : Dr. Mary Beth Trubitt

QA MEASUREMENTS

Reference 1	Expected Value: 96.7 +/- 0.5 pMC Measured Value: 96.9 +/- 0.4 pMC Agreement: Accepted
Reference 2	Expected Value: 129.4 +/- 0.1 pMC Measured Value: 129.2 +/- 0.3 pMC Agreement: Accepted
Reference 3	Expected Value: 3.1 +/- 0.2 pMC Measured Value: 3.1 +/- 0.1 pMC Agreement: Accepted

COMMENT: All measurements passed acceptance tests.

Validation:

Date: November 02, 2015