



10430 Furnace Road, Suite 107
Lorton, VA 22079
Phone: 703-646-9740

Supplemental Forensic Case Report
July 25, 2011

To:

Stephen L. Braga
Ropes & Gray LLP
One Metro Center
700 12th St., NW, Suite 900
Washington, DC 20005

Bode Case #: 2S04-114

Partial list of evidence received on May 12, 2011 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-84	E-019	Labeled as "Rope"
2S04-114-84b		1 apparent human hair fragment

Partial list of new and re-submitted evidence received on May 17, 2011 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-11	93-05718 FP3	Labeled as "Hair found on C. Byers's body"
2S04-114-11A		Hair
2S04-114-11D		Hair
2S04-114-11F		Hair
2S04-114-11H		Hair
2S04-114-11I		Hair
2S04-114-11J		Hair
2S04-114-11N		Hair
2S04-114-11X		Hair

Partial list of evidence received on May 24, 2011 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-102	E-07	Labeled as "Blue jeans/blue wallet"
2S04-114-102c		1 apparent human hair

Partial list of re-submitted evidence received on June 9, 2011 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-9	93-05717 FP6	Labeled as "Hair from ligature from S. Branch (skin, tissue, hair from ligature)."
2S04-114-17	93-05718 FP9	Labeled as "Hair from perineum of C. Byers ligature."
2S04-114-17a		Hair
2S04-114-115	K35	Labeled as "Dried known blood sample Roy Moore"

List of evidence received on July 6, 2011 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-123	Not Listed	Labeled as "Mark Byers Cheek Swabs"

For a list of previously tested and reported items for mtDNA analysis, see Appendix A.

Mitochondrial DNA Processing, Results and Conclusions:

The mtDNA profiles reported in this case were determined by procedures that have been validated according to standards established by the Scientific Working Group on DNA Analysis Methods (SWGDM) and adopted as Federal Standards.

1. A mtDNA profile was obtained from samples 2S04-114-115 (Roy Todd Moore) and 2S04-114-123 (John Mark Byers) [see **Table 1**].
2. The mtDNA profile obtained from sample 2S04-114-115 (Roy Todd Moore) is consistent with the following samples:
 - 2S04-114-11 (A-Q, U-Z)
 - 2S04-114-14
 - 2S04-114-17
 - 2S04-114-18 (B-F, H-I)
 - 2S04-114-20B

Therefore, Roy Todd Moore (2S04-114-115), or any maternal relative, cannot be excluded as a possible contributor of the above listed samples.

The mtDNA population database of the Scientific Working Group on DNA Analysis and Methods (SWGDM) has been searched for the mtDNA profiles listed above. The common mtDNA profile obtained for samples 2S04-114-11 (A-C, E-Q, U-Z), 2S04-114-14, 2S04-114-18 (B-F, H-I), and 2S04-114-20B was searched using the most conservative range of 16024-16365 and 73-340. The number of observations of these mtDNA profiles in the (SWGDM) database is as follows:

Bode Sample No.	African Database	Caucasian Database	Hispanic Database	Asian Database	Native American Database	Total No. of Observations
2S04-114-11 (A-C, E-Q, U-Z), 2S04-114-14, 2S04-114-18 (B-F, H-I), 2S04-114-20B	0 in 1305	6 in 1674	5 in 686	0 in 848	0 in 326	11 in 4839
2S04-114-11D	0 in 1305	8 in 1674	5 in 686	0 in 848	0 in 326	13 in 4839
2S04-114-17	0 in 1305	14 in 1674	14 in 686	0 in 848	0 in 326	28 in 4839

The mtDNA profiles obtained from all other samples listed in Table 2 and Appendix B are not consistent with the mtDNA profile obtained from sample 2S04-114-115 (Roy Todd Moore). Therefore, Roy Todd Moore (2S04-114-115), or any maternal relative, can be excluded as a possible contributor of these samples.

3. The mtDNA profile obtained from sample 2S04-114-123 (John Mark Byers) contains an insufficient number of differences from sample 2S04-114-17. Therefore, John Mark Byers (2S04-114-123), or any maternal relative, cannot be excluded as a possible contributor of sample 2S04-114-17.

The mtDNA profile obtained from all other samples listed in Table 2 and Appendix B are not consistent with the mtDNA profile obtained from sample 2S04-114-123 (John Mark Byers). Therefore, John Mark Byers (2S04-114-123), or any maternal relative, can be excluded as a possible contributor of these samples.

4. No mtDNA profile was obtained from evidentiary sample 2S04-114-17a.
5. Due to unreproducible data, the partial mtDNA profile obtained from sample 2S04-114-84b was deemed unreportable.

See **Tables 1, 2 and Appendix B** for a summary of the mtDNA profiles reported.

Notes:

1. The DNA extracts and submitted evidence will be retained temporarily by Bode Technology until review of the data is completed, at which time the evidence and extracts will be returned to the submitting agency.
2. Mitochondrial DNA (mtDNA) is found in sub-cellular organelles called mitochondria. A specific, non-coding region of the mitochondrial genome called the D-loop, or hyper-variable control region, is known to have variability within the human population. Multiple copies of this region of mtDNA are generated using the polymerase chain reaction (PCR). The base composition, or sequence, is then determined using automated DNA sequencing.
3. Due to consumption of evidence, sample 2S04-114-9 was not processed for mtDNA analysis.
4. Sample 2S04-114-115 was extracted twice (-115a and -115b). Both extracts produced the same mtDNA profile. The common sequence produced from both extracts will be reported as sample 2S04-114-115.
5. This summary report of references Roy Todd Moore, John Mark Byers and all evidentiary items reported for mtDNA analysis was created at the request of the client (Mr. Stephen Braga).
6. A supplemental mtDNA report was issued due to the submission of additional evidence. Please refer to reports dated: July 18, 2011, July 14, 2011, July 13, 2011, June 16, 2011, September 21, 2009, July 17, 2009, May 23, 2008, September 27, 2007, January 26, 2007 and December 30, 2005 for complete lists of items received/tested for mtDNA analysis.

Report submitted by,



Mike Cariola
SVP Operations

Table 1: Analysis of Mitochondrial DNA for Reference Samples

	2S04-114-115 Roy Todd Moore	2S04-114-123 John Mark Byers
<i>HVI</i> Reported Range	16024-16389	16024-16569
<i>Polymorphisms</i>	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16051 G 16162 G 16519 C
<i>HVII</i> Reported Range	49-361	1-537
<i>Polymorphisms</i>	73 G 242 T 263 G 295 T 315.1 C	73 G 263 G 309.1 C 315.1 C

Table 2: Analysis of Mitochondrial DNA for Evidentiary Samples

	2S04-114- 11A	2S04-114- 11D	2S04-114- 11F	2S04-114- 11H	2S04-114- 11I	2S04-114- 11J	2S04-114- 11N	2S04-114- 11X	2S04-114- 102c
<i>HVI</i> Reported Range	16024-16390	16216-16388	16024-16388	16024-16388	16024-16388	16024-16388	16024-16388	16024-16389	16024-16388
<i>Polymorphisms</i>	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16224 C 16311 C
<i>HVII</i> Reported Range	65-361	35-265	35-361	36-361	55-360	62-361	63-353	62-356	63-342
<i>Polymorphisms</i>	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 146 C 199 C 263 G 315.1 C

The following notations may apply:

- a. Transition or transversion polymorphisms as compared to a standard sequence (Anderson, et al. 1981. *Nature* 290:457-465) are designated by the appropriate letter (base).
- b. An insertion is designated a ".1" for a one base insertion, and a ".2" for a two base insertion.

Note: Polycytosine stretches are often difficult to interpret. A possible cause may be the presence of a mixture of length variants in the mtDNA of an individual. A predominant length species is often apparent; however, the frequency of a particular length species cannot be determined accurately and may vary between maternal relatives. The sequence reported for Hypervariable Region 1 represents the first 10 cytosines observed, beginning at position 16184. The sequence reported for Hypervariable Region 2 represents the number of confirmed cytosines present in the predominant base sequence. When no predominant base sequence is observed, the insertions that could not be confirmed are designated by a "N."

Appendix A: Additional items of evidence received

Partial list of evidence received on July 7, 2004 for possible DNA analysis:

<u>Bode Sample Name</u>	<u>Agency Sample ID</u>	<u>Agency Description</u>
2S04-114-03	93-05716 FP6	Labeled as "Hair from M. Moore ligature."
2S04-114-03A		Slide with two hairs (-03Aa and -03Ab).
2S04-114-03B		Slide with one hair.
2S04-114-08	93-05717 FP5	Labeled as "Two dark Caucasian hairs from S. Branch."
2S04-114-08A		Slide with one hair.
2S04-114-08B		Slide with two hairs (-08Ba and -08Bb).
2S04-114-11	93-05718 FP3	Labeled as "Hair found on C. Byers's body."
2S04-114-11A-Q and -11U-Z		Slide with 26 hairs (-11A through -11Z).
2S04-114-14	93-05718 FP6	Labeled as "Hair from lower body of C. Byers."
2S04-114-15	93-05718 FP8	Labeled as "Hair from C. Byers ligature."
2S04-114-17	93-05718 FP9	Labeled as "Hair from perineum of C. Byers ligature."
2S04-114-18	93-05718 FP10	Labeled as "Negroid hair from white sheet." [slide with 9 hairs]
2S04-114-18A		Hair from sheet, described as "Negroid hair frag."
2S04-114-18B		Hair from sheet.
2S04-114-18C		Hair from sheet.
2S04-114-18D		Hair from sheet.
2S04-114-18E		Hair from sheet.
2S04-114-18F		Hair from sheet.
2S04-114-18G		Hair from sheet, described as "animal hair."
2S04-114-18H		Hair from sheet.
2S04-114-18I		Hair from sheet.
2S04-114-20	93-05716 E3	Labeled as "Hair from E3."
2S04-114-20		Slide with two hairs (-20A and -20B).
2S04-114-21	93-05716 E5	Labeled as "Hair from scout cap."
2S04-114-21		Slide with two hairs (-21A and -21B).
2S04-114-23	93-05716 E127 LS1-QH	Labeled as "Hair from tree stump."
2S04-114-27	93-05717 FP7	Labeled as "Dyed hair from white sheet used to cover S. Branch."

Appendix B: Evidentiary mtDNA Sequence Results reported on December 30, 2005, July 17, 2009, and September 21, 2009

	2S04-114-03Aa	2S04-114-03B	2S04-114-08A	2S04-114-08Ba	2S04-114-08Bb	2S04-114-11B	2S04-114-11C	2S04-114-11E	2S04-114-11G	2S04-114-11K
<i>HVI</i> Reported Range	15998-16390	15998-16390	15998-16390	15998-16390	15998-16390	15998-16390	15998-16390	16024-16365	16024-16365	16024-16365
<i>Polymorphisms</i>	16221 T	16069 T 16126 C 16193 T 16195 C 16242 A 16357 C	16069 T 16126 C 16145 A 16186 T 16231 C 16261 T	16069 T 16126 C 16145 A 16186 T 16231 C 16261 T	16069 T 16126 C 16145 A 16186 T 16231 C 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T
<i>HVII</i> Reported Range	35-361	35-361	35-361	35-361	35-361	49-361	35-361	73-340	73-340	73-340
<i>Polymorphisms</i>	263 G 309.1 C 315.1 C	73 G 150 T 152 C 195 C 215 G 263 G 295 T 309.1 C 315.1 C	73 G 75 A 150 T 152 C 195 C 215 G 263 G 295 T 309.1 C 315.1 C 319 C	73 G 75 A 150 T 152 C 195 C 215 G 263 G 295 T 309.1 C 315.1 C 319 C	73 G 75 A 150 T 152 C 195 C 215 G 263 G 295 T 309.1 C 315.1 C 319 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 86 N 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C

	2S04-114-11L	2S04-114-11M	2S04-114-11O	2S04-114-11P	2S04-114-11Q	2S04-114-11U	2S04-114-11V	2S04-114-11W	2S04-114-11Y	2S04-114-11Z
<i>HVI</i> Reported Range	16024-16365	16024-16365	16024-16365	15998-16390	15998-16390	16024-16365	15998-16390	16024-16365	16024-16365	15998-16390
<i>Polymorphisms</i>	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T
<i>HVII</i> Reported Range	73-340	73-340	73-340	35-361	49-361	73-340	35-361	73-340	73-340	35-361
<i>Polymorphisms</i>	73 G 242 T 247 N (A/G)* 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C

* Possible heteroplasmy, see notation "e".

Appendix B: Evidentiary mtDNA Sequence Results reported on December 30, 2005, July 17, 2009, and September 21, 2009 (continued)

	2S04-114-14	2S04-114-15	2S04-114-17	2S04-114-18A	2S04-114-18B	2S04-114-18C	2S04-114-18D	2S04-114-18E
<i>HVI</i> Reported Range	15998-16390	15998-16390	16210-16390	15998-16390	15998-16390	15998-16390	15998-16390	15998-16390
<i>Polymorphisms</i>	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16093 C 16192 T 16256 T 16262 T 16270 T	16222 T 16261 T	16129 A 16183 D 16189 A 16215 G 16223 T 16278 T 16294 T 16311 C 16360 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T
<i>HVII</i> Reported Range	49-361	35-361	N/A	35-361	35-361	35-361	35-361	35-361
<i>Polymorphisms</i>	73 G 242 T 263 G 295 T 315.1 C	73 G 263 G 315.1 C	Not Analyzed	73 G 151 T 152 C 182 T 186 A 189 C 247 A 263 G 315.1 C 316 A	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C

	2S04-114-18F	2S04-114-18H	2S04-114-18I	2S04-114-20B	2S04-114-21A	2S04-114-21B	2S04-114-23	2S04-114-27
<i>HVI</i> Reported Range	15998-16390	15998-16390	15998-16390	15998-16390	16009-16390	16210-16390	16009-16390	15998-16390
<i>Polymorphisms</i>	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16145 A 16172 C 16222 T 16261 T	16069 T 16126 C 16193 T 16195 C 16242 A 16357 C	16223 T 16278 T 16362 C	Anderson	16261 T
<i>HVII</i> Reported Range	35-361	49-361	35-361	49-361	35-361	N/A	35-361	49-361
<i>Polymorphisms</i>	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 242 T 263 G 295 T 315.1 C	73 G 150 T 152 C 162 C 263 G 295 T 309.1 C 315.1 C	Not Reported	263 G 309.1 C 315.1 C	263 G 309.1 C 315.1 C

CHAIN OF CUSTODY

The Bode Technology Group, Inc.

Case Number: 2S04-114-123

Agency ID Number:

Submitting Agency Information

Name Ropes & Gray LLP
Address 700 12th Street, NW
Suite 900
Washington, DC 20005

Victim _____

Suspect _____

Contact/Attorney Stephen L. Braga

Phone Number (202) 508-4655

Additional Authorized Contacts _____

Fax Number (202) 383-9821

stephen.braga@ropesgray.com

Custody Record

Method of Delivery to Bode Fed Ex Condition Good (Sealed)
Date Delivered 7/6/2011 Time: 10:09 AM
Delivered By Fed Ex TRK # 7949 4065 6170
Delivered To Ben Bever Signature [Signature]

Date 7/6/2011	Item No. 123	Released by (print) Ben Bever	Received by (print) Ashley Kimple, for EMS	Purpose of change: Accessioning/Storage
Time 10:14 AM		(sign) <u>[Signature]</u>	(sign) <u>Ashley Kimple</u>	
Date 7/7/11	Item No. 123	Released by (print) Rachel W. Hartman, for EMS	Received by (print) Adrienne Barranco	Purpose of change: Analysis
Time 7:22 AM		(sign) <u>[Signature]</u>	(sign) <u>Adrienne Barranco</u>	
Date 07/12/11	Item No. 123	Released by (print) Adrienne Barranco	Received by (print) ASHLEY KIMPLE, for EMS	Purpose of change: Storage
Time 8:49 AM		(sign) <u>Adrienne Barranco</u>	(sign) <u>Ashley Kimple</u>	
Date 12/3/11	Item No. 123	Released by (print) [Signature]	Received by (print) [Signature]	Purpose of change: [Signature]
Time		(sign)	(sign)	
Date	Item No.	Released by (print)	Sent via:	Purpose of change:
Time		(sign)	Tracking No.	FINAL DISPOSITION

Evidence Inventory

Bode Case # 2S04-114-123 Agency Item ID _____ Agency Description Labeled as "Mark Byers Cheek Swabs"

Note: Evidence sent by the West Memphis Police Department
626 E. Broadway
West Memphis, AR 72301

Storage of Evidence: Secure evidence room

