

LABORATORY REPORT  
PA-D-P-C-PP-82-70  
(ADMITTED)

UNIT CASE NUMBER  
70-CID023-10198

Comparison of the latent prints developed on Exhibits previously identified, with record prints submitted revealed:

Exhibits P thru T. - No matching impressions.

Exhibit U-1 - The latent footprint was made by Mrs. C. MacDONALD's left foot.

Exhibit U-2 - One latent fingerprint was made by Mrs. C. MacDONALD.  
One latent palm print was made by Cpt. J. MacDONALD.

Exhibit U-3 - Eight latent fingerprints were made by Mrs. C. MacDONALD.  
Two latent palm prints were made by Mrs. C. MacDONALD and one latent palm print was made by Cpt. J. MacDONALD.

Exhibit U-4 - Two latent fingerprints were made by Mrs. C. MacDONALD.  
One latent palm print was made by Cpt. J. MacDONALD.

Exhibit U-5 - Seven latent fingerprints were made by Cpt. J. MacDONALD.  
and two latent fingerprints were made by Mrs. C. MacDONALD.

Exhibit U-6 - One latent fingerprint was made by an investigator.

Remaining latent prints were not identified. However, due to lack of clarity in some areas of the record finger and palm prints of Cpt. and MacDONALD, a complete elimination/identification could not be made.

Foot impression, appearing on Exhibit D-215, matches in general shape, and size the record footprint of Cpt. J. MacDONALD. However, due to individual ridge characteristics in the photographs taken of this no positive identification could not be made by the examiner.

Exhibits V-10 through V-71 submitted by Det B, 3rd MP GP (CI), Fort Brazz, record fingerprints and/or palm prints of possible subjects and other involved in this case. A listing of these personnel is found in Case number 70-CID023-10198 of requesting agency.

Comparison of Exhibits V-10 through V-71 (record fingerprints and/or palm prints) with the unidentified latent finger and/or palm prints developed in this case did not reveal any matching impressions.

Comparison of the identifiable latent prints developed on Exhibit L, (Esquire) with the record prints Exhibits V-1 and V-2 revealed the following:

Exhibit L-1 (advertisement page) - was made by the left ring finger of Captain MacDONALD.

Exhibit L-4 (page 59) - was not identified.

Exhibit L-9 (page 101) - was made by the left index finger of Captain MacDONALD.

EXHIBIT REPORT  
FD-P-C-PP-32-76  
(DATED)

UNIT CASE NUMBER  
70-CIE023-10198

- Exhibit L-11 (page 102) - was made by the left thumb of Captain MacDONALD.
- Exhibit L-13 (page 104) - was made by the left middle finger of Captain MacDONALD.
- Exhibit L-15 (page 109) - was made by the right thumb of Captain MacDONALD.
- Exhibit L-19 (page 114) - was made by the right thumb of Mrs. MacDONALD.
- Exhibit L-20 (page 114) - is a partial latent palm print co-ordinated w/right thumb of Mrs. MacDONALD identified as Exhibit L-19.
- Exhibit L-23 (page 116) - was made by the right thumb of Mrs. MacDONALD.
- Exhibit L-24 (page 116) - was not identified.
- Exhibit L-25 (page 116) - was not identified.
- Exhibit L-26 (back cover page) - was not identified.

**NOTE:** Regarding the red stain on the edge of the Esquire magazine, attention is directed to paragraph 22 of the chemistry annex of this report which it is reported that the red stain is in fact blood and is of the A or AB Blood Group Type A or AB.

In the crime scene process, this magazine was found in one of the two stacks of stained books, magazines and a cardboard box which was under the edge of a table located in the living room in front of the sofa.

A stain appeared to have been made by a person's finger due to its shape; however, it cannot be positively stated that it was made by a person's finger since definite ridge pattern formation was precluded by the separations of individual pages.

~~PP-C-FP-82-70~~

(Fingerprints)

Following number of latent prints developed in this case belong to CPT MacDONALD:  
(19) latent fingerprints.  
(1) latent palm prints.  
three (23) total prints.

Following number of latent prints developed in this case belong to Mrs. MacDONALD:  
(16) latent fingerprints.  
(1) latent palm prints.  
latent footprint (on coffee table; originally carried as finger & palm prints)  
(19) total prints excluding footprint.

Following number of latent prints developed in this case have not been identified:  
(16) latent fingerprints  
(17) latent palm prints  
OR  
(15) latent fingerprints  
(18) latent palm prints  
(One latent impression can be either from a finger or from a portion of a palm).

Three (3) of the latent prints developed in this case were made (identified) by investigators.

Latent prints developed in this case: 87  
Latent prints identified in this case: 47\*  
Latent prints not identified to date: 33  
Latent prints "lost" in this case: 7

FP-4

00108

EXAMINATORY REPORT  
FA-D-P-C-FP-82-70  
(CONSOLIDATED)

UNIT CASE NUMBER  
70-CID023-10198

Document Division Findings

Examination and comparison of the questioned handprinting appearing on Exhibit W-5 with the exemplars, Exhibits W-2 thru W-4 resulted in the following conclusions:

The questioned handprinting appearing on Exhibit W-5 was very probably produced by a right handed person utilizing the index and middle fingers of the right hand.

The writers of the exemplars, Exhibits W-2 thru W-4 could neither be sexed nor identified as having executed the questioned handprinting appearing on Exhibit W-5.

Firearms Division Findings

Assembly and examination of the components and locking devices submitted as exhibits Y-1, Y-2, Y-3 revealed no markings or other indications of having been assembled or opened by any instrument other than a normal house key.

D-FA-1

000109





DNA DRCM

PAGE 02

**DEPARTMENT OF DEFENSE  
ARMED FORCES INSTITUTE OF PATHOLOGY  
WASHINGTON DC 20306-6000**



MARCH 14, 2006

Office of the Armed Forces  
Medical Examiner - DNA Registry (40-31a)

Timothy D. Junkin, Esq. (Via Facsimile)  
Law Offices of Moffett & Junkin, Chartered  
800 South Frederick Avenue, Suite 203  
Gaithersburg, MD 20877

Subject: USA v. Jeffrey R. MacDonald

Dear Mr. Junkin:

In response to your letter dated March 14, 2006 requesting descriptions AFDIL Specimen Numbers 58A(1), 75A, 91A and 51A(2), please find attached the Laboratory Notes from Grant Graham detailing his microscopic examinations of many samples for this case in 1999 and 2000.

If you have any questions, please free to contact me at (301) 319-0133 or via facsimile at (301) 295-5932.

Sincerely,

Kimberly B. Murga  
Assistant Technical Leader  
Nuclear DNA Section  
Armed Forces DNA Identification Laboratory

cc: Mr. Brian Murtagh, Esq. (Via Facsimile)  
Mr. James Canik

**AFIP/OAFME TRACE MATERIALS ANALYSIS  
LABORATORY NOTES**

AFIP#: 99C-Φ438

LAB CONTROL #: 99-Φ9

NAME: Grant Graham

PAGE: 1

|      |  |
|------|--|
| 14Φ3 | Received three sets of slides contained in a heat sealed ziplock type bag from Susanne Barrett/ AFIDL. Bag is marked with AFIDL case # 99C-Φ438 and slide code numbers: 45A; 46A; 48A; 51A; 53A; 55A; 56A; 58A; 62A; 63A; 75A; 76A; 91A; 93A; 94A; 98A; 104A; 112A; 113A; 115A. The package also bears "SMR 11.24.99" written across the heat seal at the top. Bag opened along left side.   |
| 1447 | Photography started.<br>26 Nov 99  |
| 1524 | Three bundles of slide containers were photographed. One bundle of two containers marked respectively: 99C-Φ438-45A, 46A and 99C-Φ438-55A-56A. Both containers secured with evidence tape. One bundle of seven containers marked respectively: 99C-Φ438-115A; 99C-Φ438-112A; 99C-Φ438-1Φ4A; 99C-Φ438-98A; 99C-Φ438-94A; 99C-Φ438-93A; 99C-Φ438-91A. All seven containers secured with evidence tape. One bundle of nine containers marked respectively: 99C-Φ438-113A; 99C-Φ438-52A; 99C-Φ438-51A; 99C-Φ438-48A; 99C-Φ438-76A; 99C-Φ438-75A; 99C-Φ438-63A; 99C-Φ438-62A; 99C-Φ438-58A. All nine containers secured with evidence tape. |
| 17Φ6 | Initial photography complete. Evidence placed in evidence storage for safe keeping. All slide containers & slides marked w/a initials " <del>BBB</del> ".<br>26 Nov 99   |
| 1357 | Slide 99C-Φ438-46A: One human hair, medium blond in color, approximately 71mm long, maximum approximate shaft diameter = 83.3 $\mu$ m. Root present with root sheath, follicular tag and attached tissue indicating hair was forcibly removed. Fracture of root sheath noted perpendicular to length of shaft, located toward tip of root. Unknown adhering tissue and/or debris noted along hair shaft. Fractures noted adjacent to root tip perpendicular to length of shaft. Unknown tissue and/or debris observed adhering along length of shaft at various locations.<br>29 Nov 99  |
| 1613 | Slide 99C-Φ438-45A: No human hairs present. No possible blood or other tissue present.<br>29 Nov 99  |
| 1619 | Slide 99C-Φ438-55A: No human hairs present. Contains fiber bundles and non-human hairs. No possible blood or other tissue present.<br>29 Nov 99  |
| 1725 | Slide 99C-Φ438-56A: No human hairs present. Contains one fiber & one hair of non-human origin. No possible blood or other tissue present.<br>29 Nov 99   |
|      | *  |

## AFIP/OAFME TRACE MATERIALS ANALYSIS

## LABORATORY NOTES

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AFIP #: 99C-Φ438

LAB CONTROL #: 99-Φ9

NAME: Grant Graham

|      |   |
|------|---|
| 174Φ | Evidence placed in evidence storage area for safekeeping.<br>29 Nov 99  |
| Φ616 | Slide 99C-Φ438-524: Slide in poor condition with mounting medium (dried) on top of cover slip and scratch tape on two sides, holding the broken cover slip in place. Slide contains one human hair, with cuticle damage (splitting) noted along shaft. One broken section of the cover slip was observed to be under the main cover slip. To observe the hair root, a section of scratch tape was peeled back from the slide using a sterile scalpel. The root is present and bears tissue in the form of a folicular tag. Although the condition of the slide makes parts of the hair difficult to observe, there appears to be a red in color substance on the hair shaft that could be blood. Hair is 8.0 µm wide and approximately 54 mm long; medium blond in color. |
| Φ785 | Slide 99C-Φ438-1134: Slide contains one human hair with no root. Shaft bears tissue that appears to be blood. Shaft has a break along the length. One end of the hair is split & broken, the other end is broken. There is a red in color fiber present along the shaft of the hair. The hair is approximately 7.0 µm wide & approximately 83mm long; light blond in color.   |
| Φ83Φ | Slide 99C-Φ438-484: Contains one human hair with root and small follicular tag. Contains one fiber fragment located along shaft. Diameter = approximately 7.0 µm. Length = approximately 141mm; Color is light blond.   |
| Φ952 | Slide 99C-Φ438-514: Contains three human hairs. Hairs have no roots. Hairs numbered 1,2 & 3 for better identification. Hair #1 has broken ends and is approximately 73.5 µm wide, 23 mm long and is light blond to golden brown in color. Also has two crushed areas. Hair #2 has a rounded tip and broken end. Also bears tissue that appears to be blood as well as unknown debris. Approximately 53.3 µm wide, approximately 17mm long, and is medium blond to medium golden brown in color. Has fiber fragment adhering along shaft. Hair #3 has cut ends, is approximately 78.4 µm wide, approximately 24 mm long and is medium blond to medium golden brown in color.   |
| Φ42  | Slide 99C-Φ438-764: Contains fibers and non-human hairs. No possible blood or other tissue present.<br>30 Nov 99  |
| Φ56  | Slide 99C-Φ438-634: Slide in poor condition due to mounting medium being on top of cover slip. Slide contains fragments of hairs and fibers, however the poor condition of the slide prevents sufficient clarity to determine if the hair fragments are of human origin. The fragments are primarily located around a blue "X" at the center area of the slide.   |

**AFIP/OAFME TRACE MATERIALS ANALYSIS  
LABORATORY NOTES**

AFIP #: 99C-Φ438

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LAB CONTROL #: 99-Φ9

NAME: Grant Graham

|           |   |
|-----------|---|
| 1107      | Slide 99C-Φ438-62A: Contains no human hairs. Contains fibers.   |
| 30 Nov 99 | No possible blood or other tissue present.  |
| 1108      |   |
| 30 Nov 99 | Slide 99C-Φ438-75A: Contains 1 human hair with root & follicular tissue. Hair is approximately 132.3 $\mu\text{m}$ wide, approximately 63 mm long and medium blond to dark golden brown in color. Has splits along shaft & breaking.  |
| 1109      |   |
| 30 Nov 99 | Slide 99C-Φ438-58A: Contains two human hairs. Both have roots but no tissue. Hair not marked with red dot is dark golden brown in color; end is cut. The hair marked with a red dot has a slightly rounded tip. The hair marked with a red dot is approximately 102.9 $\mu\text{m}$ wide and approximately 43 mm long. The other hair is approximately 73.5 $\mu\text{m}$ wide & approximately 5 mm long. For identification purposes, the hair not marked with a red dot is numbered "1" and the other hair is numbered "2."   |
| 1205      |   |
| 30 Nov 99 | Slide 99C-Φ438-112A: Contains four human head hairs, two of which have been marked "1" & "2" for better identification. Hair marked "1" has a split end, has sustained crushing along the shaft and is broken at the other end. It is approximately 63.7 $\mu\text{m}$ wide and light to medium blond in color. Hair marked "2" has a broken end, is approximately 63.7 $\mu\text{m}$ wide, light blond in color. Other end of hair is observed to be in slide harder. Hair marked with black "X" has a root present and adhering tissue, forcibly removed, is light blond in color and approximately 73.5 $\mu\text{m}$ wide. Additional hair has no root, rounded tip and cracked end. It is located in the center of the slide area, is light blond in color and is approximately 73.5 $\mu\text{m}$ wide. Length of the four hairs cannot be determined because the hairs are interwoven amongst each other, making length difficult to establish. Additionally, portions of the hairs extend into the opaque areas of the mounting medium edges. |
| 1232      |   |
| 30 Nov 99 | Slide 99C-Φ438-115A: Contains no human hairs. Contains fibers and non-human hairs(2). No possible blood or other tissue present.  |
| 1252      |   |
| 30 Nov 99 | Slide 99C-Φ438-98A: Slide in poor condition due to mounting medium being atop of cover slip. Contains one human hair with root & associated follicular and sheath tissue. Root is elongated & forcibly removed. Virtually entire length of hair is encrusted with tissue that appears to be blood. Hair is approximately 63.7 $\mu\text{m}$ wide. There is a red in color fiber wrapped around shaft. Due to poor condition of the slide, viewing for length measurement is hampered, but hair is greater than 120mm in length. Color is medium blonde.   |
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## AFIP/OAFME TRACE MATERIALS ANALYSIS

## LABORATORY NOTES

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AFIP #: 99C-Φ438

LAB CONTROL #: 99-Φ9

NAME: Grant Graham

|                   |   |
|-------------------|---|
| 1316<br>30 Nov 99 | Slide 99C-Φ438-1Φ4A: Contains two human hairs labeled 1&2 for further identification. Hair #1 has root with adhering follicular tissue. The hair is approximately 161.7 $\mu\text{m}$ wide and approximately 61 mm long. The hair is light blond to medium golden brown in color. Hair #2 has root with small amount of adhering tissue. The hair is approximately 137.2 $\mu\text{m}$ wide and approximately 51 mm long. The hair is medium blond to medium golden brown in color. |
| 1334<br>30 Nov 99 | Slide 99C-Φ438-93A: Contains one human hair with root but no tissue. Hair is approximately 73.5 $\mu\text{m}$ wide and 17mm long. The color is light blond to medium golden brown. Tip of hair is rounded. Light hair.  |
| 1342<br>30 Nov 99 | Slide 99C-Φ438-94A: Contains fibers & non-human hairs.  |
| 1348<br>30 Nov 99 | Slide 99C-Φ438-91A: Slide in poor condition due to mounting medium being out of cover slip. Contains unknown debris & yellow fibrous material that has red in color substance adhering to it that could be blood. Fiber marked with black dot and "1" for better identification. Contains one human hair with root but no tissue. Hair is approx. 29.4 $\mu\text{m}$ wide, approx. 5 mm long.   |
| 1736<br>30 Nov 99 | Slides 99C-Φ438-45A, 46A, 48A, 51A, 52A, 55A, 56A, 58A, 62A, 63A, 75A, 76A, 91A, 93A, 94A, 98A, 104A, 112A, 113A, and 115A were sealed in their respective slide cases via evidence tape and released to Daniel E. Kite / AFDTL Analyst III in a sealed plastic bag.  |
| 1409<br>15 Dec 99 | Received one (1) slide case marked "99C-Φ438-99A, 1Φ6A." Slide case received from Suzanne M. Barrett / AFDTL Supervisor. Analyst sealed in plastic bag marked : "SMB 12.15.99 99C-Φ438-99A, 1Φ6A." Slide case sealed with evidence tape. Slide case and plastic bag placed in FTML evidence storage locker #1 for safe keeping.   |
| Φ93Φ<br>16 Dec 99 | Retrieved slide case 99C-Φ438-99A, 1Φ6A from FTML Storage locker #1 to conduct overall photography of item. Photography completed at 1Φ43 hours. Bag, case and slides initialed "Φ93Φ" and placed inside FTML Evidence Storage Locker #1.   |
| Φ94Φ<br>17 Dec 99 | Retrieved slide case 99C-Φ438-99A, 1Φ6 A from FTML Evidence "Storage Locker #1 to examine slides.   |
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## AFIP/OAFME TRACE MATERIALS ANALYSIS

## LABORATORY NOTES

AFIP#: 99C-Φ438

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LAB CONTROL #: 99-Φ9

NAME: Grant Graham

|                   |  |
|-------------------|--|
| Φ51<br>17 Dec 99  | Slide 99C-Φ438-99A: Contains no human hairs. Contains manmade and animal hair fibers. Fibers of blue, green, yellow and purple colors can be seen in the slide. One animal hair fiber (wool) has a large amount of debris adhering to the shaft, some of which is red in color and could be blood. One area of the slide bears a green in color circle. Inside the green circle are green and yellow fibers that have a red in color substance adhering to their length that could be blood. Another area of the slide bears a black in color circle. The fibers inside the black circle have a red in color substance adhering along their length that could be blood. The green circle had been previously marked. The black circle was marked by me during examination.       |
| 12Φ1<br>17 Dec 99 | Slide 99C-Φ438-1ΦΦA: Contains various fibers and non-human hairs. One area of slide bears a green circle. Inside the green circle are red, green, blue, yellow and transparent fibers that have red in color debris adhering along their length that could be blood. One yellow fiber has what appears to be a crushed area. Also, one animal hair (cat) is present that bears red in color debris that could be blood. Additional fibers that may bear blood are within a black circled area (made by me during examination). Black circle contains non-human hairs (cat & wool) that have adhering red substance that could be blood. Yellow, green and greenish-brown fibers are also in the black circle; these fibers also have adhering red substance that could be blood. |
| 15Φ7<br>17 Dec 99 | Sealed Slide container 99C-Φ438-99A-1ΦΦA with slides 99C-Φ438-99A and 99C-Φ438-1ΦΦA inside, inside original plastic bag with evidence tape. Tape marked with date, time, initials. Bag and contents placed into FTMAI evidence storage locker #1.  |
| 1543<br>4 Jan 00  | Received three slide containers in a plastic bag labeled "99C-Φ438-76A, 91A, 112A" from Suzanne Barratt / AFDI. The bag contains three slide containers marked 99C-Φ438-76A, 99C-Φ438-91A and 99C-Φ438-112A respectively. The items were received in good condition and placed in FTMAI evidence storage locker #1. The bag was marked with date, time and initials.   |
| 1532<br>7 Jan 00  | Opened "slide containers 99C-Φ438-76A & 99C-Φ438-112A to photograph close-ups of the slides for ease in measuring. Photos completed at 1646. Slides placed in FTMAI evidence storage locker #1.  |

## AFIP/OAFME TRACE MATERIALS ANALYSIS

## LABORATORY NOTES

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AFIP #: 99C-Φ438

LAB CONTROL #: 99-Φ9

NAME: Grant Graham

3ΦJan00 A 5.5 times photographic enlargement of slide 99C-Φ438-1124  
Φ917 was obtained via an original 35mm color slide image utilizing  
a Fuji Picturestat. The resulting image was used to measure  
the hairs in Slide 99C-Φ438-1124 together with microscopic  
examination of the hairs. Length measurements (approximate)  
are as follows:

- Hair #1: approx 3.1 cm
- Hair #2: approx 6.0 cm
- Hair #3: approx 2.7 cm
- Hair #4: approx greater than 14.5 cm. A more accurate  
measurement could not be made due to  
close intermixing of hairs on slide.

28 May 00 DR43 By request of Dr. Holland (AFDIL) the top and bottom  
(underside) of slide 99C-Φ438-63A was cleaned (mounting  
medium removed from outer surface) to facilitate better  
observation of the slide. Xylene on a sterile blood blotter  
pad was used to remove the mounting medium from the  
outer surface. The mounting medium inbetween the coverslip  
and slide was not disturbed. After cleaning, visibility  
of the slide was good. There are several fiber fragments  
visible and only one hair with root; no adhering tissue  
or possible blood visible. The hair is transparent with  
little pigment visible; scales are not visible. Tip is  
rounded & root bulbous. Hair is approximately 7 mm in  
length and 29.4  $\mu$ m wide, approximately. Due to lack of  
observable characteristics it cannot be determined if the  
hair is of human or animal origin - (human?)

B Jun 00 Slides 99C-Φ438-99A; 100A; 112A; 75A; 93A; 51A; 45A; 46A;  
1322 55A; 56A; 91A; 76A; 134; 98A; 94A; 104A; 63A; 52A; 58A;  
48A; 115A and 62A were released to Suzanne M. Barratt  
(AFDIL) via DA Form 4137 (Evidence/Property Custody Document).

## AFIP/OAFME TRACE MATERIALS ANALYSIS

AFIP #: AFDIL # 99C-0438 LABORATORY NOTES

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LAB CONTROL #: 99-09

NAME: Grant Graham

|                    |  |
|--------------------|--|
| 16 July 00<br>1638 | Received the following items from Suzanne Barratt (AFDEL Trich Leader): Slide # 99C-0438-51A, Slide # 99C-0438-63A, and hair exemplars in sealed containers; 99C-0438-04A, 99C-0438-05A, 99C-0438-131A, 99C-0438-156A, 99C-0438-31A. The above items were received in a sealed plastic bag bearing the above mentioned item numbers and initials/date (SMB/7-10-00). The items were received from via D.A. Form 4137 and placed in FTML evidence storage locker #1. Also received was a letter and copy of laboratory notes from Brian M. Mustaghe.  |
| 9 Aug 00<br>1644   | Called Dr. Duforest/defense expert concerning item 99C-0438-63A, which I had previously reported as; could not be determined if human or animal because of lack of observable characteristics. Dr. Duforest suggested observing the hair with a polarizing microscope under crossed polars at 45° with a 1/4 wave plate.   |
| 10 Aug 00<br>1644  | Called Dr. Duforest and discussed item 99C-0438-63A while observing the item as described in 9 Aug 00 entry. Under crossed polars with 1/4 wave plate the following observations were made and described to 914-428-8649 Dr. Duforest over the phone: 45°; orientation from top right to lower left of viewing area hair appears yellow in color. At root end the yellow is lighter, turns darker yellow in center area of hair shaft and turns white toward the tip. No scale pattern visible, however some scales are observed to project outward from the shaft, more so toward the tip than at the root end. Cuticle thickness appears thicker at center area of the hair shaft. Root is bulbous and slightly elongated at tip of bulb. At 45°; orientation from top left to lower right of viewing area the hair appears dark blue-black at the outer margin along the hair shaft, with a more bluish-gray color in the center area of the hair shaft. Cuticle margin is readily discernable along shaft to tip, but not in root area. Scales seemed to project outward along shaft, more so toward tip. With crossed polars and no 1/4 wave plate the hair appears white in both orientations. At 180° horizontally it appears black at side edges and blue in center area. No medulla is visible in any orientation. Based on the above information, my opinion as to the origin of the 63A hair has not changed. |
| 18 Aug 00<br>0716  | Reexamined 99C-0438-51A to determine whether hair matches the hair described in a letter written by Mr. Brian M. Mustagh dated June 30 2000 and accompanying laboratory notes by comparing morphological characteristics of the questioned hair described as E-5, described in the 30 June 00 letter by Mustagh and the copy of examination notes to the hairs in slide 51A, the questioned hair is the hair mounted between two hairs as described by Mustagh in his letter and the examination notes. The questioned hair was labeled by myself as "2" with a red dot adjacent to the hair. The hairs described as known exemplars, which are on either side of the questioned hair, were labeled "1" & "3" for use in identifying the location of the hairs.  |

## AFIP/OAFME TRACE MATERIALS ANALYSIS

AFIP#: AFDEL# 99C-0438

## LABORATORY NOTES

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LAB CONTROL #: 99-09

NAME: Grant Graham

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|-------------------|--|
| 18 Aug 06<br>1334 | Instituted photography of items 99C-0438-04A, 05A, 131A, 156A, & 31. Completed 1448.   |
| 18 Aug 06<br>1640 | Examined 99C-0438-156A labeled "Collette MacDonald, NC-1 11:25 AM 9/17/74." to obtain samples suitable for DNA testing. Collected 5 hairs with roots. Roots appear elongated and also show signs of possible putrefaction in the root area. Additionally, tissue that could be blood is present on the root. The roots appear black in color. Entire sample had numerous areas of dried, dark red-brown in color debris adhering in clumps along the ends and shaft of the hairs. Hairs were blond in color. The 5 testing hairs were placed in a droppings fold and then into an envelope and sealed. |
| 18 Aug 06<br>1640 | Examined 99C-0438-04A labeled "Kristen MacDonald, NB 19," to obtain samples suitable for DNA testing. Collected 5 hairs with roots. Roots appear elongated and also show signs of possible putrefaction. Additionally tissue that could be blood is present on the root. Roots appear black in color. Hairs were blond in color. The 5 hairs were placed in a droppings fold and then into an envelope and sealed.   |
| 19 Aug 06<br>1716 | Examined 99C-0438-131A labeled "Kimberly MacDonald, 11:20 AM 9/17/74, 152." Collected 5 hairs with roots. Roots are dark with possible blood tissue adhering. Hairs were blond in color. The 5 hairs were placed in a droppings fold and then into an envelope and sealed.   |
| 21 Aug 06<br>1619 | Examined 99C-0438-05A labeled "brown hair of Helen Woods Sturtevant" to obtain samples suitable for DNA testing. Collected 5 hairs with roots, but little tissue present. Roots are bulbous and show no signs of being forcibly removed. Appear to be telogen hairs. The 5 hairs were placed in a droppings fold and then into an envelope and sealed. Hairs were brown in color.  |
| 26 Aug 06         | Examined 99C-0438-31. Contained 3 slide containers each with one slide insider containing hair or hairs. The slides were labeled with case # 99C-0438-31 and individually identified as "Item 1", "Item 2" and "Item 3" for better identification. Advised by Suzi Barratt / AFDEL no further examination is necessary.  |
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2403

1  
2                   IN THE UNITED STATES DISTRICT COURT  
3                   FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
4                   FAYETTEVILLE DIVISION  
5  
6

7                   UNITED STATES OF AMERICA,         )  
8                   v.    )  
9                   )    NO. 75-26-CR-3  
10                  JEFFREY R. MacDONALD,                )  
11                  Defendant.                                )  
12

13                   TRIAL BEFORE  
14                   THE HONORABLE FRANKLIN T. DUPREE, JR.  
15                   UNITED STATES CHIEF DISTRICT JUDGE  
16                   AND A JURY  
17

18                   AT RALEIGH:           THURSDAY, JULY 26, 1979  
19

20                   PAGES 2403- 2640                   TRIAL DAY SIX  
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1                   MR. BLACKBURN: Your Honor, just one  
2                   moment. No further questions, Your Honor.  
3                   MR. SMITH:                 No questions.  
4                   THE COURT:              Call your next witness.  
5                   MR. BLACKBURN:         Your Honor, we would  
6                   call Dr. William Hancock.

7                   (Witness excused.)

8                   (Whereupon,

9                   DR. WILLIAM FRANKLIN HANCOCK, JR.  
10                  was called as a witness, duly sworn, and testified as  
11                  follows:)

12                  D I R E C T    E X A M I N A T I O N    2:42 p.m.

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14                  BY MR. BLACKBURN:

15                  Q        Please state your name.

16                  A        William Franklin Hancock, Jr.

17                  Q        If you would, sir, speak loudly enough so  
18                  everyone can hear you. Dr. Hancock, where do you  
19                  presently reside?

20                  A        I presently reside in Glendon, North  
21                  Carolina.

22                  Q        How are you presently employed?

23                  A        Pardon me, sir?

24                  Q        How are you presently employed?

25                  A        I am just presently terminating an



1           four stab wounds that were clustered around the center  
2           of the chest. Then there was a fifth stab wound which  
3           is in the neck area. These were described basically  
4           as gaping incised wounds.

5           The other lesions that I described--the  
6           significant ones--were small, maybe less than a quarter  
7           of an inch circular kind of bruises that--a few of these  
8           occurred under the nipples, and then there was sort of an  
9           ill-defined pattern extending along, I think, the right  
10          side of the chest in sort of an "s-shaped" pattern.

11          There were approximately ten of these  
12          circular small wounds, a few of which appeared to  
13          penetrate through the skin. The others seemed to cause  
14          superficial skin penetration with some bruising around  
15          them. The major wounds were the central gaping incised  
16          wounds.

17          Q       With respect to the hands of Kristen  
18          MacDonald, what, if anything, did you observe there, sir?

19          A       There was multiple minor lacerations--cuts  
20          basically--on both hands if I recall from reading my  
21          protocol and, in addition, there was a more significant  
22          wound. I think it was on the right hand--the right hand  
23          on either the ring or middle finger. There was a fairly  
24          large--it looked like an incised or cut wound--  
25          approximately an inch and a half or so on the side of



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1                   the finger. But the hand also had some minor cuts on  
2                   it in other places which basically did not cause any  
3                   bleeding, but the large wound that I described was down  
4                   basically to the bone.

5                   Q         Do you have an opinion, sir, satisfactory  
6                   to yourself, as to the type or classification of the  
7                   wound that was on her finger?

8                   A         I would say as a general reference these  
9                   could be defined as defensive wounds or these could be  
10                  wounds incurred in the process of other type of wounds  
11                  happening. As a general statement, I would say that.

12                  Q         With respect to the back and shoulder area  
13                  of Kristen MacDonald, what did you observe there, sir,  
14                  during the autopsy?

15                  A         On the back and in the approximate mid-back  
16                  area, she had similar incised, slightly gaping wounds.  
17                  There were ten of these grouped in the center of the  
18                  back, and there were two others which were slightly off,  
19                  I believe, it was the left side, but there were ten in  
20                  the approximate central area of the back.

21                  Then there were two incised wounds which  
22                  were sort of over one of the shoulder blades. A total of  
23                  12 of these incised wounds were on the back. There was  
24                  some minor other wounds. I cannot say definitely that  
25                  these occurred with the incised wounds. It might just





6-187

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FBI  
DOJ20 mm n  
Bob  
Horn & Fisher  
- Woods -Polaris PF. 42<sup>1/2</sup> R<sup>2</sup>  
P.C. P.F. 42<sup>1/2</sup> R<sup>2</sup>  
R<sup>2</sup> R<sup>2</sup>

(38)

multi strand cotton fiber identical to the multi strand cotton thread used to sew the seams of the pajama jacket, Exhibit D-210 no bloodstains - One piece of long or gray like vegetable matter & one blue multi strand fiber, not identified. - Three cut pieces of slaty grey with bloodstains. - One human hair hair grossly similar in all physical characteristics to the hair of Colith McDonald.

Exhibit E-303 - Fiber and debris from under the trunk and legs of Colith McDonald in MBR - Vial contained numerous purple multi strand cotton fibers similar to the purple multi strand thread used to sew the seams of Exhibit D-210. also several blue cotton/polyester multi strand fiber identical to the cotton/polyester material of Exhibit D-210\* - one long grey/brown cotton fiber, bloodstained - one human pubic or body hair, no comparison due to a lack of known -

COO154

777

6-170

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Army

20 March,

2008

Hair as hair  
- Wards -

② 39

Several pieces of wood identical to the  
wood of Exhibit A. — Two pieces of yellow  
tissue paper with bloodstains

Ex E-304 — One black sweatshirt, property of  
Cpt MacDonald.

Removed several hairs from the sweat  
shirt — all were animal hair, similar  
to horse hair — Could find no hair to use  
as a known of Cpt MacDonald.

Exhibit E-305 — One pair of rubber gloves  
gloves with creviced print. Recovered  
print and compared with the microscope.

Identified to the prints from Ex A, as Ex 203,  
as Exhibit A by color and texture.  
Run on D.C. and got good comparison  
on chemical comparison. It is the  
opinion of the Examiner that all of these  
prints could have originated from a  
common source.

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