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FBI Laboratory

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LABORATORY REPORT

To: Jose Cortez
Special Agent
Albuquerque

Date: March 15, 2022

Case ID No.: AQ-3514414

Lab No.: 2021-02245-6

Communication(s): October 28, 2021

Agency Reference(s):

Subject(s):

Victim(s): Halyna Hutchins

Discipline(s): Latent Prints

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FBI Laboratory Evidence Designator(s):

Assigned evidence from Laboratory number 2021-02245-6:

Item 2 Revolver (1B1, E6842161; SFCSO Item #1)
Item 11 Ammunition box (1B2, E6842162; SFCSO Item #2)
Item 12 Tray from Item 11 Ammunition box (1B2, E6842162; SFCSO Item #2)

Assigned evidence from Laboratory number 2021-02245-14:

Item 15 Fingerprints and palm prints of Hannah Gutierrez (SFCSO Item #206)
(1B13, E6842263)
Item 17 Fingerprints and palm prints of Sarah Zachry (SFCSO Item #229)
(1B17, E6842267)
Item 19 Fingerprints and palm prints of David Halls (SFCSO Item #238)
(1B23, E6842273)

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This report addresses the request for friction ridge print examinations.

RESULTS OF EXAMINATIONS

See Appendix A for key terms and the methods, limitations, and interpretations regarding the results of examinations.

The following table provides information regarding the known friction ridge print records of the individual(s) for comparison. Unless otherwise indicated, record(s) were obtained from NGI. The letter designation will be used throughout this report:

Individual(s) for Comparison			
Letter Designation	Name	UCN/DOB	Record Information
A	HANNAH GUTIERREZ	---	Item 15 (no other record located)
B	SARAH ZACHRY	---	Item 17 (no other record located)
C	DAVID HALLS	---	Item 19 (no other record located)
D	ALEX RAE BALDWIN	509224AB3	Record located

The table below lists results of friction ridge print examinations:

Results of Examinations										
GUTIERREZ (A) ZACHRY (B) HALLS (C) BALDWIN (D)										
Item Number	Analysis			Comparison	Evaluation				NGI Comparisons	
	Total	Fingerprint	Palm print	Impression	Individuals	Anatomical Source	Identification	Exclusion		Inconclusive
Item 11	10	P1 ¹	---	---	A-D	---	---	---	---	Yes
		P2 ¹	---	---	A-D	---	---	---	---	No
		P3 ¹	---	---	A-D	---	---	---	---	Yes
		P4 ¹	---	---	A-D	---	---	---	---	No
		P5 ¹	---	---	A-D	---	---	---	---	Yes
		P6 ¹	---	---	A-D	---	---	---	---	No
		P8	---	---	A-D	#4	A	---	---	Yes
		P9 ¹	---	---	A-D	---	---	---	---	No
		P10 ¹	---	---	A-D	---	---	---	---	Yes
		P11	---	---	A-D	#1	A	---	---	No
Total prints suitable for comparison:	10									

Automated searches of appropriate print(s) were conducted, but no additional identifications were effected.

There are no additional prints suitable for comparison.

REMARKS

Verification(s) and/or blind verification(s) were conducted by the following individuals:

- Michelle Machalka
- Kira Glass
- Vanessa Ramos
- Sabrina Tishko

¹ Identified to a Laboratory employee

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For questions about the content of this report, please contact Forensic Examiner Shannon E. Prince at (703) 632-7148 or seprince@fbi.gov.

For questions about the status of your submission, including any remaining forensic examinations, please contact Elizabeth Small at (703) 632-7152.

The evidence will be returned under separate cover.

This report contains the opinions and interpretations of the issuing examiner(s) and is supported by records retained in the FBI files. This report is consistent with the current Department of Justice Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline. The work described in this report was conducted at the Quantico Laboratory. Once a written discovery request is received, please allow a minimum of thirty days to process.

Shannon E. Prince
Latent Print Operations Unit

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APPENDIX A

Explanation of Key Terms:

Suitable for Comparison - A print is suitable for comparison (or claimed) when sufficient reliable information may be present such that an identification decision could be reached.

The anatomical source of a print deemed suitable for comparison is designated as follows:

- Fingerprint - coming from any part of a finger and designated as #1 through #10 on a standard fingerprint card
- Palm print - coming from any part of the palm area of a hand and designated as LP or LPP for left palm and RP or RPP for right palm
- Toe print - coming from any part of a toe and designated as #1t through #10t in the same manner as a standard fingerprint card
- Footprint - coming from any part of the sole of a foot and designated as L Ftpt for left foot and R Ftpt for right foot
- Handprint - coming from fingerprint(s) and palm print that appear to be deposited by the same touch and designated as LHP for left handprint and RHP for right handprint
- Impression - coming from an anatomical region that cannot be determined and may have come from any of the above sources

A print deemed suitable for comparison that is detected on an item of evidence may be assigned a print number, 'P'.

NGI - Next Generation Identification system, the FBI's national friction ridge print database

OGA - Information sharing efforts with Other Government Agency

UCN/DOB - Universal Control Number (formerly FBI #)/Date of Birth

CJIS - Criminal Justice Information Services Division

Methods, Limitations, and Interpretations:

Friction ridge skin consists of ridges, which are raised portions of skin, and furrows, which are the valleys in between the ridges. Friction ridge skin is found on the fingers, palms, and soles of the feet. A friction ridge print is a reproduction of the friction ridge features when the skin comes into contact with an item. Items of evidence submitted for friction ridge print examinations may be examined visually, examined with various light sources, and processed with chemicals and powders to detect the presence of friction ridge prints. The specific sequence of examinations and processes depends upon the nature of the evidence.

Friction ridge print examinations are conducted using Analysis, Comparison, and Evaluation (ACE) (1), which includes an assessment of the quantity and quality of the information present. The steps of ACE are applied to friction ridge prints as appropriate.

Analysis is the assessment of a friction ridge print by a qualified examiner, accounting for the quantity and quality of the features detected in the print. An examiner will assess the types of features and the spatial relationships of the features to one another, which may be affected by factors such as pressure and movement when the print is transferred (2) (3). A print is deemed suitable for comparison when sufficient reliable information may be present such that an identification decision could be reached.

A thorough analysis is conducted on friction ridge prints prior to conducting comparisons. Analysis is documented by marking observed information in accordance with the Latent Print Units' standard operating procedures (4).

Comparison is the direct side-by-side observation of friction ridge prints deemed suitable for comparison to determine whether the information observed during Analysis is in disagreement or agreement between two prints. When determining if features correspond, an examiner accounts for variation in the appearance of the friction ridge prints due to factors such as pressure and movement (2).

Evaluation is the formation of a conclusion based on the examiner's observations, assessments, and documentation generated during the analysis and comparison of the friction ridge prints. Decisions that may be reached are as follows (5):

- Identification is an examiner's conclusion that two friction ridge prints originated from the same source. The conclusion is an examiner's decision that the observed friction ridge skin features are in sufficient correspondence such that the examiner would not expect to see the same arrangement of features repeated in a print that came from a different source and insufficient friction ridge skin features in disagreement to conclude that the prints came from different sources. The basis for an identification conclusion is an examiner's decision that the observed corresponding friction ridge skin features provide extremely strong support for the proposition that the two prints came from the same source and extremely weak support for the proposition that the two prints came from different sources. An identification is the

statement of an examiner's opinion (an inductive inference¹) that the probability that the two prints were made by different sources is so small that it is negligible. An identification is not based upon a statistically-derived or verified measurement or comparisons of all friction ridge print features in the world's population. While an identification to the exclusion of all others is not supported by research, studies have shown that as more reliable features are found in agreement, it becomes less likely to find that same arrangement of features in a print from another source (6).

- Exclusion is an examiner's conclusion that two friction ridge prints did not originate from the same source. The basis for an exclusion is an examiner's decision that there are sufficient friction ridge skin features in disagreement to conclude that the two impressions came from different sources.
- Inconclusive is an examiner's conclusion that there is insufficient quantity and clarity of corresponding friction ridge skin features between two prints such that the examiner is unable to identify or exclude the two prints as originating from the same source. The basis for an inconclusive conclusion is an examiner's decision that an identification or exclusion cannot be made due to insufficient information in either of the two prints examined. The conclusion can be based on either a latent print or a known print.
 - Inconclusive is reported when there is insufficient information in the known print. Additional recordings from the compared individual may allow for a conclusive decision to be reached.
 - Latent inconclusive is reported when there is insufficient information in the print deemed suitable for comparison. Additional recordings of the compared individual are not expected to allow for a conclusive decision to be reached.

While the examination process is subjective in nature (7), the Latent Print Units have quality assurance measures in place to minimize variability and reduce the chance of error. Examples include but are not limited to verification and blind verification, which are implemented in accordance with the Latent Print Units' standard operating procedures (4).

- Verification is the application of ACE to a friction ridge print by another qualified examiner.
- Blind verification is a type of verification by another examiner who has limited case information and does not know the evaluation decision of the primary examiner.

¹ "By the process of induction or inference, predictions about new situations are inferred or induced from the existing body of knowledge. In other words, an inference is a generalization, but one that is made in a logical and scientifically defensible manner." Oxford Dictionary of Forensic Science 130 (2012).

There is no meaningful predictive rate of error for the entire comparison process (9) (10); however, studies have demonstrated that examiners reach accurate and reliable conclusions under specific test conditions (11) (12).

The presence of a friction ridge print on an item of evidence indicates contact was made between the source and the item. The presence of a friction ridge print alone does not necessarily indicate the significance of the contact or the time frame during which the contact occurred.

Due to a variety of factors, the recovery of friction ridge prints on items of evidence is not always successful. A lack of friction ridge prints on an item or the exclusion of a friction ridge print from a given source does not necessarily mean that the given source did not come into contact with the item.

References:

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