NSW Police Force

EXPERT CERTIFICATE

Section 177, Evidence Act 1995 No. 25

In the matter of:	**Homicide of Crispin Wilson DYE** **Forensic Case Number/s 9613378 & 961339**
Place Statement Made:	Fingerprint Operations, Police Headquarters, Parramatta
Date:	12 June 2023

Name:	John Nance
Work Address:	Fingerprint Operations – Police Headquarters, Parramatta
Work Telephone:	[redacted]
Occupation:	Detective (Tech) Sergeant – Fingerprint Expert

STATES:

1. This statement made by me accurately sets out the evidence that I would be prepared, if necessary, to give in court as a witness. The statement is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I will be liable to prosecution if I have willfully stated in it anything that I know to be false or do not believe to be true.

2. I make the following declarations:

   - I have read the Expert Witness Code of Conduct in Schedule 7 of the NSW Uniform Civil Procedure Rules 2005 and I agree to be bound by the Code.
   - I have made all inquiries that I believe desirable and appropriate, and to the best of my knowledge, no matter of significance that I regard as relevant has been withheld from the court.

3. I hereby certify I am a Fingerprint Expert. I have specialised knowledge based on my training, experience and study of fingerprints since 2015. Refer to **Annexure 1** for a summary of my qualifications and experience.

4. For a glossary of terms used in this certificate see **Annexure 2.**

5. On the 30th of May 2023, a written request was received by the Director of the Crime Disruption and Special Inquiries Law, Office of the General Counsel, NSW Police Force from Enzo CAMPOREALE, Crown

Witness: E. Elkass — Signature: John Nance

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Solicitor, requesting the following information in relation to the homicide of Crispin Wilson DYE, referencing case number C161666:

1. Please confirm whether any outstanding fingerprints in relation to the death of Mr Dye have been included on NAFIS; and

2. Please advise whether the NSWPF possess any records about which specific exhibits the fingerprints were located on.

6. On the 2nd of June 2023, the Cold Case Review Team of the Major Crime Analysis Unit commenced a review of the matter. Initial investigations into the referenced Case Number C161666 indicate this number relates to a fingerprint exhibit entry of Crispin DYE's wallet and its contents. Examination forms indicate that exhibit C161666 was examined under job number J941419 yielding 10 developed fingerprints, however records do not indicate results from the 10 developed fingerprints.

   An ongoing search for further records indicating results and for photographic negatives of this examination is currently being undertaken by the Cold Case Review Team. Due to the ongoing search for filed records relating to this examination, confirmation of whether any outstanding fingerprints in relation to the death of Mr DYE have been included on NAFIS cannot be made at this point in time.

7. As part of this review Forensic Case Numbers 961338 and 961339 have also been identified as being related to the matter. On the 5th of June 2023 searches were conducted on the National Automated Fingerprint Identification System (NAFIS) against Forensic Case Numbers 961338 and 961339. As a result of this search, the following set of record prints were retrieved from NAFIS:

   - A set of record fingerprints bearing the name **I269**

8. On the 10th of June 2023, I retrieved the following sets of record prints on file at Fingerprint Operations, Forensic Evidence and Technical Services Command, PARRAMATTA:

   - A set of record fingerprints bearing the name Richard William LEONARD.
   - A set of record fingerprints bearing the name Paul Stephen COVI.
   - A set of record fingerprints bearing the name Wayne POPPLEWELL.

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9. On the 10th of June 2023, I retrieved the following set/s of images containing latent fingerprints from the files maintained by the Forensic Evidence and Technical Services Command, NSW Police Force:

   - **Forensic Case Number 961338** (Forensic Crime Scene Register Index No 9601360) - Examination of 2 pages people mag

   - **Forensic Case Number 961339** (Forensic Crime Scene Register Index No 9601361) - Examination of 5 letters and Envelopes

10. On the 10th of June 2023, I carefully compared all the fingerprints appearing in the images bearing the **Forensic Case Numbers 961338** and **961339** with the fingerprints of the following persons:

    - **I269**
    - Richard William LEONARD.
    - Paul Stephen COVI.
    - Wayne POPPLEWELL.

    I utilised the ACE-V methodology to analyse, compare and evaluate the latent and record fingerprint impressions. This comparison was made by placing those images, one at a time, side by side with those fingerprint impressions, and referring backwards and forwards between them. I compared pattern type and ridge flow, friction ridge characteristics, their relative position to each other and the number of intervening ridges between those characteristics. The comparison process was carried out systematically and sequentially until all available friction ridge detail had been compared, and a conclusion determined

11. In my opinion, which is based wholly or substantially on my specialised knowledge as a fingerprint expert using the ACE-V methodology, I have reached the following conclusions:

Forensic Case Number 961338 (Forensic Crime Scene Register Index No 9601360) Examination of 2 pages people mag				
Graph	**Location**	**Conclusion**	**Person**	**Area**
GN1	On upper R/H of magazine page headed "Wellington Surplus Stoles"	Identified	Richard William LEONARD	Right Thumb
GN2	On R/H middle of mag page headed "Cancer Dream warns woman of dying lover"	Inconclusive	Richard William LEONARD	Left Index
GN3	On rear of page 24	Identified	Richard William LEONARD	Right Index
GN4	On rear of page 24	Identified	Richard William LEONARD	Right Middle

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Forensic Case Number 961339 (Forensic Crime Scene Register Index No 9601361) Examination of 5 letters and Envelopes				
Graph	**Location**	**Conclusion**	**Person**	**Area**
GN1	Palm on top front of envelope with "159" in top R/H corner	Identified	**I269**	Left Palm
GN2	On rear R/H side of envelope with date 20/12/95 stamped on rear	Identified	Richard William LEONARD	Left Index
GN3	Palm on front toward top L/H side of letter dated Fri 15th commencing "Hi **I269** stupid me"	Identified	**I269**	Left Palm
GN4	On rear of letter dated Fri 15th with writing in red comm "sorry about no min no!"	Searched on NAFIS Not Identified	-	-
GN5	On rear of letter dated Fri 15th above red writing comm "Sorry about"	Searched on NAFIS Not Identified	-	-
GN6	On bottom R/H corner front of letter dated 13/6/95 Tues	Inconclusive	**I269**	Right Palm
GN7	On bottom at rear of foolscap sheet with map diagram	Searched on NAFIS Not Identified	-	-

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12. The underlying scientific principles, the methodology used to reach the conclusion/s above and the various factors to be considered when interpreting fingerprint evidence are outlined in **Annexure 3**.

13. Fingerprint Operations, NSW Police Force is accredited by the National Association of Testing Authorities (NATA) as meeting the requirement specified by the Australian and International Standard (AS ISO/IEC 17025) for the competence of forensic laboratories (NATA Accreditation Number 15184). Accreditation requires adherence to an approved quality assurance system and participation in an external proficiency testing program.

14. I hereby give notice under the Criminal Procedure Act 1986, that the proposed exhibits, which have been indicated in this Certificate, may be inspected at Fingerprint Operations, Forensic Evidence and Technical Services Command, NSW Police Headquarters, Level 4B, 1 Charles Street, Parramatta at a mutually agreeable time.

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ANNEXURE 1

EXPERT QUALIFICATIONS IN THE SCIENCE OF FINGERPRINTS

Detective (Tech) Sergeant John NANCE

I have been attached to New South Wales Police Force, Fingerprint Operations, Forensic Evidence and Technical Services Command since 2015. During this time I have acquired extensive training, knowledge and practical experience in the Science of Fingerprints.

Formal Qualifications/Courses/Accreditations

- *Certificate of Expertise in the Science of Fingerprints* issued by the Australasian Forensic Science Assessment Body (AFSAB) 2020.
- *Graduate Certificate in Forensic Fingerprint Investigation* issued by the Canberra Institute of Technology in 2020.
- *Bachelor's Degree in Science (Forensic Science)* issued by the University of Western Sydney in 2009.
- *Associate Degree in Policing Practice* issued by Charles Sturt University in 2014.
- *Certificate of Attainment for the Fingerprint Induction Course* facilitated by Fingerprint Operations Branch, NSW Police Force in 2015.
- *Certificate of Attainment for the Palm Course,* facilitated by Fingerprint Operations Branch, NSW Police Force in 2016.
- *Certificate of Training for the Forensic Investigation I Course*, facilitated by the NSW Police Force Forensic Services Group in 2016.
- *Certificate of Attainment for the Advanced Ridgeology Course*, facilitated by Fingerprint Operations Branch, NSW Police Force in 2016.
- *Certificate of Attainment for the Advanced Ridgeology II Course*, facilitated by Fingerprint Operations Branch, NSW Police Force in 2018.
- *Verification Expert Certificate,* issued by Forensic Evidence and Technical Services Branch, New South Wales Police Force, dated 16 March 2023.

Witness: E. EL — Signature: —

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Practical Experience in the Science of Fingerprints

I have gained extensive practical experience in the Science of Fingerprints while performing duties within Fingerprint Operations, where I have:

(a) Classified, searched, compared and identified many thousands of latent finger and palm prints developed at crime scenes. I have also passed an annual latent print identification proficiency test in accordance with the standards set by the National Association of Testing Authorities of Australia (NATA);

(b) Classified, searched, compared and identified many thousands of inked and livescan finger and palm print impressions on fingerprint ten print forms, utilising both computerised and manual classification systems;

(c) Examined and managed hundreds of crime scenes, including many of a very serious and complex nature, and have developed numerous finger and palm prints that have been positively identified. I have also examined many deceased persons to obtain finger and palm prints for the purposes of identification.

I have additional practical experience from performing duties at the Evidence Recovery Section (responsible for the specialised laboratory examinations of evidence for fingerprints and DNA collection using special chemical development and enhancement techniques) where I have examined hundreds of items of evidence and developed numerous finger and palm prints that have been positively identified.

At the completion of my training I successfully completed various written and oral examinations set by the Australasian Forensic Science Assessment Body (AFSAB). I was certified by this panel and issued a 'Certificate of Expertise in the Science of Fingerprints' recognising this achievement.

Maintenance of Expertise/Professional Knowledge

I have read and studied many books and manuals pertaining to the science of fingerprints, and I maintain an informed knowledge of current issues and new developments within the fingerprint science by reading articles and journals concerned with the field of forensic fingerprint identification.

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ANNEXURE 2

GLOSSARY OF TERMS

Crime Scene Officer – An examination officer who collects forensic evidence at complex (major) crime scenes and may also be qualified to conduct fingerprint comparisons. The minimum qualification for a Crime Scene Officer is completion of the Forensic Investigator 1 Course (or equivalent) facilitated by NSW Police Force, Forensic Evidence and Technical Services Command.

Fingerprint – The intricate design of the friction ridge skin found on the underside of the fingers, palm, toes or feet. The word fingerprint is also a generic term used to describe all impressions of friction ridge skin.

Graph – A label used for recording purposes to indicate the location of fingerprint evidence developed at crime scenes or on evidence examined in a laboratory. F1 is the first fingerprint developed during the examination; F2 is the second fingerprint developed during the examination, etc.

Latent fingerprint – The impression left on a surface when contact is made with a fingerprint. Latent fingerprints are normally invisible and are mainly comprised of the residue on the skin, which may include natural perspiration and/or contaminants from other sources (e.g. moisturiser or food residue). Various development techniques are then applied (e.g. fingerprint powder or chemicals) to the fingerprint in order to make it visible.

NAFIS – The National Automated Fingerprint Identification System. This is a computerised database of fingerprint records that is used to search and store both record and latent fingerprints. Although NAFIS is a useful tool in searching latent fingerprints, it does not establish a fingerprint identification – this function is performed by a fingerprint expert.

NATA – National Association of Testing Authorities (NATA) is recognised by the Commonwealth government as the sole national accreditation body for establishing and maintaining competent laboratory practice

Record Fingerprint – A set of fingerprint impressions collected directly from a person for the purpose of identification. In most circumstances this is comprised of an impression from each of the ten fingers and an impression of each palm. These impressions are most commonly recorded on a 'Livescan' electronic fingerprint device, however can also be recorded using ink and paper.

Scene of Crime Officer – An examination officer who collects forensic evidence at non-complex (volume) crime scenes. The minimum qualification for a Scene of Crime Scene Officer is completion of the Forensic Investigator 1 Course (or equivalent) facilitated by NSW Police Force, Forensic Evidence and Technical Services Command.

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ANNEXURE 3

SCIENTIFIC PRINCIPLES

FUNDAMENTAL PRINCIPLES OF FINGERPRINT IDENTIFICATION

Fingerprint identification involves the assessment of impressions made by friction ridge skin on the underside of the fingers, palms and feet. All findings are premised on three fundamental principles that are supported by extensive bodies of research and empirical testing[1]:

- Friction ridge skin is so highly variable that it is not duplicated in another person or another region of the same person (uniqueness).
- Friction ridge skin is permanent and remains unchanged for the life of a person (permanence).
- Fingerprint pattern types vary within limits to allow for systematic classification.

FINGERPRINT IDENTIFICATION METHODOLOGY: ACE-V

Fingerprint examiners employ the *Analysis, Comparison, Evaluation and Verification (ACE-V)* methodology[2] when analysing fingerprint impressions. The phases of the ACE-V methodology are as follows.

Analysis is the assessment of a friction ridge impression to determine suitability for comparison. This incorporates the interpretation of pattern type, friction ridge path and friction ridge detail. Other factors considered include clarity, surface type, development method and distortion.

Comparison is the process of observing friction ridge detail in two impressions to determine whether or not there is agreement. This systematic, side-by side comparison process is based upon the appearance, sequence and spatial relationship of the friction ridge detail.

Evaluation is the process of reaching a conclusion based on the quality and quantity of information observed in the analysis and comparison phases. There are several possible conclusions that can be drawn:

[1] *For studies supporting uniqueness and permanency of friction ridge skin, see: Organisation of Scientific Area Committees (OSAC) - Friction Ridge Subcommittee 2017, Guideline for the Articulation of the Decision-Making Process for the Individualization in Friction Ridge Examination (Latent/Tenprint). Available from: https://www.nist.gov/topics/forensic-science/friction-ridge-subcommittee.*

[2] Ashbaugh, DR 1999, *Quantitative-Qualitative Friction Ridge Analysis: An Introduction to Basic and Advanced Ridgeology*, CRC Press, New York Boca Raton, pp. 87-148.

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- **Identified**: The two fingerprint impressions were made by the same person.
- **Not Identified**: This conclusion can take one of two forms:
    - Exclusion: The two fingerprint impressions were not made by the same person.
    - Insufficient: There is insufficient clear friction ridge detail in the impression/s to conduct a comparison.
- **Inconclusive**: Following the comparison, there is insufficient friction ridge information in the latent fingerprint and/or the record fingerprint to identify or exclude the person as being the source of the latent fingerprint.

Verification is the independent analysis, comparison and evaluation of the friction ridge detail carried out by another qualified fingerprint examiner. In the NSW Police Force - Forensic Evidence and Technical Services Command, the verification step is undertaken by a designated Verification Expert, who is a senior, practicing fingerprint expert appointed to that role based on their skills, knowledge, training and experience in fingerprint analysis. Where the conclusions of the two experts are in agreement, the NSW Police Force – Forensic Evidence and Technical Services Command will report the unanimous decision.

In the majority of cases, the ACE-V process produces a unanimous conclusion between the two fingerprint experts. In rare cases where there are differing opinions between two experts, the case is referred to a senior fingerprint expert for a final determination. Following this assessment, the NSW Police Force – Forensic Evidence and Technical Services Command will report the consensus decision.

The ACE-V methodology, as applied by qualified, practising fingerprint experts, has been the subject of method validation studies and has been shown to be accurate, repeatable and reproducible.[3]

STATEMENT OF LIMITATIONS OF RESULTS

[3]Langenburg, G 2012, *A Critical Analysis and Study of the ACE-V Process*. Ph.D. Thesis, University of Lausanne, Switzerland; Pacheco, I et al, 2014, 'Miami-Dade Research Study for the Reliability of the ACE-V Process: Accuracy & Precision in Latent Fingerprint Examinations', *NIJ Report (Award 2010-DN-BX-K268)*; Ulery, B et al, 2011, 'Accuracy and Reliability of Forensic Latent Print Decisions', *Proceedings of the National Academy of Sciences*, vol. 108, no. 19, pp. 7733-7738.

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The conclusions expressed in this report are subject to certain inherent limitations of fingerprint evidence and the ACE-V methodology.

Potential for Error

Qualified, practicing fingerprint examiners have demonstrable and specialised abilities to accurately detect discriminating features in friction ridge skin impressions. The accuracy of qualified, practicing fingerprint experts in comparing and identifying friction ridge skin impressions has been demonstrated to significantly exceed that of people who are untrained (i.e. novices).[4] However, the comparison of fingerprint impressions is a task conducted by humans, and subsequently there exists a potential of error.

To mitigate risk of error, NSW Police Force - Forensic Evidence and Technical Services Command incorporates strict peer review practices requiring independent verification of all fingerprint identifications by a minimum of one appointed Verification Expert. My conclusion(s) is not a statement of fact, but one of expert opinion.

Absence of Fingerprints

It is not always possible to detect fingerprints which are suitable for analysis, even if a person has handled an object or touched a surface. Some explanations for this include:

- Insufficient perspiration or residue on the hands to leave a detectable or identifiable latent fingerprint.
- The poor condition of the receiving surface (e.g. rough, dirty or otherwise unsuitable surface).
- Handling an object in a manner that smears or obliterates any fingerprint on that object.
- Various environmental factors affecting the fingerprint after it has been placed on the surface (e.g. heat, moisture, sunlight, etc.).
- Measures were taken to prevent fingerprints being left on an object (e.g. the person wore gloves).

Age of Fingerprints

[4]Tangen, J, Thompson, M & McCarthy, D, 2011, 'Identifying Fingerprint Expertise', *Psychological Science*, vol. 22, no. 8, pp. 995-997; Thompson, M, Tangen, J & McCarthy, D, 2014, 'Human Matching Performance of Genuine Crime Scene Latent Fingerprints', *Law and Human Behaviour*, vol. 38, no. 1, pp. 84-93.

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There is presently no scientific means of determining the age of a latent fingerprint. In some circumstances, a latent fingerprint may remain detectable and/or identifiable for a considerable length of time, whilst in others it will degrade relatively quickly. Factors which influence this variability include:

- The composition of the latent fingerprint. If it has a high content of fats or oils, it will last a longer period of time.
- A latent impression which is comprised of a large amount of fingerprint residue will more likely survive for a longer period of time than one with a smaller amount of residue.
- The type and condition of the receiving surface may affect the detectable life of a latent impression (e.g. porosity, cleanliness and chemical composition).
- If a fingerprint is positioned on a surface which is handled regularly it will more likely be damaged and may only last a limited period of time.
- Fingerprints which are exposed to sun, wind or rain will generally last a shorter period of time than those protected from the elements.
- The shorter the period of time between the deposit of a latent fingerprint and the examination of the surface on which it is deposited, the greater the chance of detection.

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