Report of:

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Relating to:

The Judicial Inquiry into the death of President Salvador ALLENDE in Santiago de Chile, 11th September 1973

Declaration

- 1. I understand that my overriding duty is to the Court rather than to the parties that instruct me, and I have complied with that duty. I have set out in my report what I understand from those instructing me to be the questions in respect of which my opinion as an Expert is required.
- 2. All of the matters on which I have expressed an opinion lie within my field of expertise.
- 3. The interpretation and conclusions are dependent upon the information provided; if this should change, it may be necessary for me to revise my interpretation and conclusions. Any such considerations are best carried out prior to the date of any hearing.
- 4. To assist the Court, conclusions may be drawn which are a consequence of the writer's experience, knowledge, consideration and observations. Such conclusions are those of the writer. It is for the Court to weigh the value of such evidence.
- 5. I have no connection with any parties, witnesses or advisers, which could lead to a conflict of interest with regard to the matters under consideration in this case.
- 6. I confirm that I have not entered into any arrangement whereby the amount or payment of my fees is in any way dependent upon the outcome of the case under investigation.

Statement of Truth

I confirm that in so far as the facts stated in my report are within my own knowledge, I have made clear which they are and believe them to be true; and that the opinions expressed represent my true and complete professional opinion.

David Pryor Date 18th July 2011

This report should be read in conjunction with my Preliminary Activity Report, made at the offices of the Servicio Medico Legal, Santiago de Chile and dated 27th May 2011.

Qualifications and Experience

I am a graduate of the Faculty of Science, London University.

In 1970 I joined the Metropolitan Police Forensic Science Laboratory (MPFSL). MPFSL merged with the Home Office in 1996 to form The Forensic Science Service (FSS), providing a unified service to the Criminal Justice System of England and Wales.

I retired from FSS in 2008 and since then, until the end of March 2011, have been employed by the Metropolitan Police Authority as a Consultant Firearms Examiner and Trainer in the Directorate of Forensic Sciences, Forensic Firearms Unit. This laboratory forms part of the National Ballistics Intelligence Service.

At the time of my involvement in this inquiry, I am in practice as an Independent Consultant in Forensic Ballistics.

I have practised as an operational Forensic Scientist since 1970 and have specialized in the examination of Firearms, Ammunition and related material since 1972, including the examination of crime scenes and autopsies.

I have given expert evidence at all levels of the Criminal Justice System in the United Kingdom, including the Criminal, Civil and Coroner's Courts.

I have given evidence in several overseas jurisdictions, including Germany, Cyprus, Antigua, The British Virgin Islands and Gibraltar and have provided evidence for presentation in the Turks and Caicos Islands, Kurdish Iraq and at the International Criminal Tribunal for the former Yugoslavia (ICTY) in The Hague, Netherlands.

In 1991 I was a member of a United Kingdom Home Office Delegation to Colombia to review the provision of Forensic Science Services to their Criminal Justice System and to advise on a training programme.

I have been a member of the Forensic Science Society since 1970. This is the professional body for forensic scientists in the United Kingdom.

I am a Past Chairman of the European Network of Forensic Science Institutes Firearms Expert Working Group, and have acted as Technical Advisor to the Home Office and the Association of Chief Police Officers on many matters relating to the control of firearms in the UK.

I was a member of the first British Forensic Team in Kosovo in 1999, undertaking forensic examinations as an Expert on Mission under the auspices of the United Nations in relation to specific indictments charged against Slobodan Milosevic. My evidential findings were presented to ICTY.

I have held various lectureships in the course of my career, including the Inns of Court School of Law, the Diploma in Medical Jurisprudence, Society of Apothecaries and have been a guest lecturer at the Science Museum, Kensington.

I have received an official commendation for my work and was admitted to the Freedom of the City of London in 2003.

Circumstances and Purpose

On 21st April 2011 I was contacted by Dr Morris Tidball-Binz, Forensic Coordinator of the Assistance Division of the International Committee of the Red Cross, Geneva, Switzerland, who asked me if I would be willing to join an international team of experts to participate in the judicial inquiry into the death of the former President of Chile, Dr Salvador Allende Gossens, on 11th September 1973.

I was then contacted by Dra. Alejandra Jimenez Mora, Human Rights Advisor of the Servicio Medico Legal (SML), Ministry of Justice of Chile, who outlined the purpose of the judicial inquiry and the timetable for my visit to Chile.

I subsequently was advised of the names of other members of the expert team: Dr Douglas Ubelaker, Physical Forensic Anthropologist, United States. Dr Francisco Etxeberria, Professor of Forensic Medicine, Spain.

Dra. Mary Luz Morales, Forensic Pathologist, Colombia.

Dr German Tapia Coppa, Legal Physician, SML Chile.

Angel Medina Bejarano, Physical Forensic Anthropologist, SML Chile.

Isabel Martinez Armijo, Archaeologist, SML Chile.

Edgar Rueda Guevara, Forensic Odontologist, SML Chile.

The expert team was accompanied by international observers:

Dr Morris Tidball-Binz, Forensic Coordinator, ICRC Geneva.

Felipe Donoso, Regional Delegate, ICRC.

Luis Fondebrider, Argentine Forensic Anthropology Team.

Program of Work

On Sunday 22nd May 2011 I arrived in Chile and at 8:30 pm in the evening was present at a meeting in the offices of the SML Chile with the other experts listed above and other staff of the SML, including Dr Patricio Bustos Streeter, National director of the SML.

At this meeting the purpose of the investigation was explained. It was emphasised that the process was a judicial inquiry to determine the identity, the cause of death and the manner of death of President Allende.

Information was provided to the team of experts regarding the original autopsy report, including a sketch made from observations at the scene of the incident in the Palace of La Moneda on 11th September 1973.

On the morning of Monday $23^{\rm rd}$ May 2011 I attended, with others listed above, at the Cemeterio General, Santiago, and witnessed the exhumation of the coffin of Dr Allende from the family tomb.

The coffin was then conveyed by staff of the SML to the premises of the SML nearby. I witnessed the opening of the outer casket, then an inner, smaller, wooden casket. After measurements had been taken, the wooden casket was X-rayed.

At 11:00 hrs in the laboratories of the SML I witnessed the removal of the contents of the casket.

I then watched a video depicting the exhumation of the original casket from the site of first burial and the transfer of the remains to the wooden casket. I understand that this was not a judicial exhumation.

Later that afternoon I viewed the X-rays and saw a few radio-opaque spots on fragments of bone. Information from the autopsy reports was presented, in particular the presence of blackening on the palm of the left hand and a halo around a gunshot wound under the chin, also with extensive blackening.

On Tuesday 24th May 2011, at the laboratories of the SML, I commenced examination of the bones and fragments, together with Dr Ubelaker, Dra. Morales and others listed above.

The purpose of my examination, which was conducted with the aid of a Leica stereomicroscope, was to see if I could identify any areas of interest that would evidence the presence of firearms propellant, bullet material or ballistic damage.

I observed that the bones of the skull were extensively fractured.

Digital images were taken through the microscope as the examinations proceeded.

On Wednesday 25th May 2011 I continued my examinations as outlined above. In the afternoon, ballistic and analytical experts from the Policia de Investigationes (PDI) Chile attended the laboratories of the SML and took various samples for chemical analysis to detect inorganic elements indicative of the presence of Gunshot Residue (GSR).

Later that evening an initial examination was undertaken of the clothing that had been present in the burial casket. The clothing consisted of a jumper, trousers, socks, shoes and underpants.

On Thursday 26th May 2011, at the SML and together with all other experts and SML staff, I met members of the Allende family, together with two personal physicians. The remains of Dr Allende and his clothing were viewed.

Following the departure of the family, I concluded my examination of the remaining bone and teeth fragments.

In the afternoon of 26th May 2011 I discussed the contents of the available ballistic reports in order to understand the specifications and characteristics of the weapon and ammunition involved in this incident, and the circumstances under which the body of Dr Allende was recovered.

On 27th May 2011 I was shown a photograph of the weapon that I understand to be the AK-47 (Kalashnikov) assault rifle involved in this incident. I saw a clear image of the selector change lever, which I recognized was in the fully automatic position. I further understand the rifle to have been fitted with a folding metal butt stock, which was in the extended position.

Technical Note re. the AK-47 Rifle

The AK-47 is a selective-fire, gas-operated assault rifle, chambered for the 7.62x39mmM43 cartridge, and was designed and developed between 1944-1946 in the former Soviet Union by Mikhail Kalashnikov.

It is a weapon very widely distributed worldwide, and has been produced under licence in many countries of the former Warsaw Pact.

The rifle is of a type known as selective-fire. That is to say it will function as a self-loading weapon, with one pull of the trigger discharging one round, or as a fully automatic arm, where missiles continue to be discharged until pressure on the trigger is released or the magazine is empty.

Switching between these two modes is accomplished by means of a pivoting change lever situated on the right hand side of the receiver. This lever has three positions: The uppermost is 'SAFE", the middle position is 'AUTOMATIC', and the lower position is 'SEMI-AUTOMATIC'.

The image below depicts the right hand side of the receiver of a specimen AK-47 (Korean) Kalashikov rifle, with the selector lever in the 'fully-automatic' position.



Photo 1: AK-47 Rifle, Right Side of Receiver: Selector lever on 'Fully-Automatic'

Published specifications for the standard rifle are:

Weight 4.3kg with empty magazine

Length 870mm with fixed wooden stock

875mm with folding stock extended

645mm with stock folded

Barrel Length 415mm

Mechanism Type Gas-operated, rotating bolt

Rifling 4 lands/grooves; right-hand twist

Distance Muzzle to Trigger 550mm

Sights Adjustable rear sight, 100-800 metres

Specifications for the ammunition (alternatives) are:

Cartridge 7.62x39mmM43 Ball Type PS

Tracer Type T.45

Armour-Piercing Incendiary Type BZ

Incendiary Ranging Type Z

Specifications for the Weapon/Ammunition combination are:

Rate of Fire 600 rounds per minute

(Cyclic Rate, Automatic)

Muzzle Velocity (Ball bullet) 710 metres per second

Effective Range 300 metres, fully automatic

400 metres, semi automatic

10, 20, 30, 40 or 75-round box or drum

magazine. Common configuration is a

30-round curved box magazine

Operation of the Rifle

Feed system

As mentioned above, the rifle employs a gas-operated mechanism. This system

utilises a portion of the high-pressure gas generated by the discharge of the

cartridge to act upon a piston and so cycle the mechanism.

Having inserted a loaded magazine into the receiver of the weapon, and cocked the

mechanism by retracting and releasing the external cocking lever, a round of

ammunition is loaded into the chamber.

With the change lever, described above, set to Automatic or Semi-Automatic, the gun

can now be fired by depressing the trigger.

Extraction and ejection of the fired cartridge case and loading of subsequent rounds

into the chamber is now undertaken automatically, until the magazine is empty.

As the mechanism cycles and the gas piston has been driven backward a short

distance, then excess gas is vented to the atmosphere through a series of

perforations in metal tubing situated directly above the barrel.

The following image depicts part of the barrel of the specimen AK-47 Kalashnikov

rifle with the gas port and vents.

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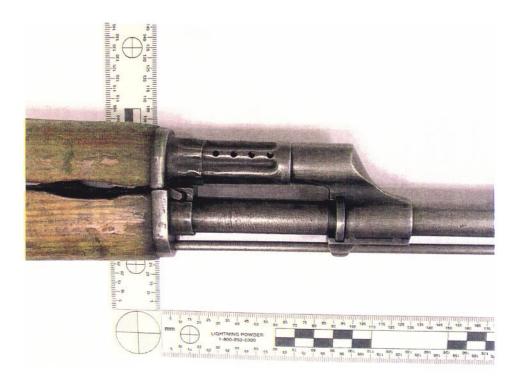


Photo 2: AK-47 Rifle: Forward part of fore-grip; barrel with gas port and vents

The AK-47 will eject fired cartridge cases to the right-hand side of the weapon, when held conventionally.

Note regarding Ammunition

The specifications listed above relate to four types of ammunition designed for this rifle. I will describe two versions that are pertinent to this inquiry.

The term 'Ball' is given to the standard solid bullet, often containing a mild steel core surrounded by lead, encased within a copper/steel metal jacket.

The term 'Tracer' is given to a bullet that incorporates a lead core at the forward part of the bullet, the rear portion of the bullet holding a tracer canister containing a pyrotechnic mixture that burns in flight, so delineating the trajectory of the bullet. The ballistics of a tracer bullet are designed to mirror those of the standard ball bullet as far as possible. Tracer ammunition is identified by a standardised colour coding, and in Warsaw-Pact usage the bullet tip is painted green.

Note regarding Ammunition recovered on 11th September 1973

From information available to me, I understand that two cartridge cases were recovered from the scene of the incident, and both were marked with the numberings 711 and 71.

This numbering is termed the headstamp, and is information imparted by the maker. Published literature shows 711 to refer to a factory in Soviet Russia, and 71 refers to 1971, the year of manufacture.

I understand that a further twenty-six rounds of unfired ammunition were recovered, and that they were each loaded with a tracer bullet.

I am also informed that a single bullet was recovered from a cushion on a sofa situated within the room where Dr Allende died, and across the room from where his body was found. It was described as being very deformed from a tangential impact with a hard surface. It was also described as a tracer bullet; the flare component had been consumed, and had burnt the cushion on which it fell.

I am informed that this fired bullet and the two fired cartridge cases were matched conclusively to the AK-47 rifle found with Dr Allende's body.

Note regarding the Initial Autopsy Report

This report describes blackening to the palm of the left hand, measuring 2x4cm, with a stellate gunshot entry wound under the chin, immediately to the left of the midline and behind the lower maxilla.

The entry wound is described as having a blackened margin, with a halo 1.5cm in width in the lower quadrant and 0.5mm in the upper quadrant.

An exit wound is described in the top posterior of the cranium and the trajectory is described as being from bottom to top with no lateral deviation; short range and consistent with self-infliction.

Note regarding the Scene Report

A bullet impact/impacts are described on the eastern wall of the room, 2.8m above ground level. A single fired tracer bullet (see above) was found on a couch on the western wall of the room.

The body is described as being found semi-reclined on a couch with the body resting on the back of the couch and the torso reclining on its right hand side.

Over the abdomen is the gun with the muzzle directed to the right.

A separate, empty, magazine, and a helmet are also reported.

I have seen a drawing, given a reference number *CROQUIS No. 15254*, made at the time of the discovery of the body of Dr Allende based on the information from Dr Patricio Guijon Klein. This drawing depicts an AK-47 rifle, folding stock version with the stock extended, resting between the legs and over the lower abdomen of the deceased. The buttplate is shown folded along the axis of the stock.

The hands are shown either side of the weapon. A helmet is depicted underneath and partly covered by the left arm. Brain tissue is shown on the couch, in the area of the base of the rifle magazine.

In my experience, the above depiction is entirely consistent with the likely position for a weapon of the type involved in this incident to be found in a case of self-infliction, particularly if the deceased were seated at the time.

I have also seen a photograph, taken afterwards, depicting the body of Dr Allende, but with the rifle lying across the body. Text annotating the diagram referred to above states that Dr Guijon had moved the weapon from its position depicted in the drawing to lie across the legs of the body.

Both the drawing and the photograph depict massive disruption to the head.

Two impacts are described to a tapestry hanging on the wall above and behind where Dr Allende was sitting.

Further images were present in this report that depicted various matters such as a disrupted head wound, blackening under the chin, the rifle, the tapestry, an unfired round of pistol ammunition and a fired cartridge case. I was unable to study these images in detail, in view of the poor quality of reproduction.

On Friday 27th May 2011, I was shown the photograph of the rifle referred to above on page 6 of this report, clearly showing the selector lever in the fully automatic position.

With a cyclic rate of 600 rounds per minute, two rounds will be discharged automatically in one fifth of a second, or 200 milliseconds.

Ballistic Considerations relating to the AK-47 Rifle

The science of ballistics is conveniently separated into three categories:

- 1. Interior Ballistics. This phase studies the interaction of the gun and ammunition, and refers to the time from when the cartridge primer is ignited to when the bullet leaves the barrel.
- 2. Exterior Ballistics. This phase studies the flight of the bullet to its target, in other words the trajectory of the bullet after leaving the barrel.
- 3. Terminal Ballistics. This phase studies the interaction of the bullet with its target. In the case of interaction with living tissue, these studies fall under the heading of Wound Ballistics.

The Concept of Kinetic Energy as related to Wounding Potential

The energy possessed by a body by reason of its movement is termed Kinetic Energy. This can be explained in simple physical terms as the ability to do work on another body, in contrast to Potential Energy, which is the energy possessed by a body by reason of its position.

Kinetic Energy (KE) is a product of the mass of an object multiplied by the square of its velocity. In the standard international system of nomenclature (SI), KE is expressed in Joules.

It is important to appreciate the difference between the KE produced by a rifle such as the AK-47 and a typical handgun, such as a 9mm Parabellum military pistol.

A great deal of published data are available, however a typical KE value for the 7.62x39mm AK-47 bullet would be in the region of 1900-2000 Joules, and for the 9mm Parabellum pistol 460-580 Joules. This large difference can be understood by appreciating the relationship of KE to the square of the velocity.

In the examples quoted above, both bullets are of similar mass, but the velocity of the 7.62x39mm is approximately twice that of the 9mm pistol, resulting in a KE some four times greater.

Energy Transfer and the Mechanism of Wounding

When a bullet enters a body, it is retarded by the tissues encountered and gives up its KE to the target. The rate at which this KE is transferred will determine the severity of the wound produced, but it is important to realise that not all body tissue will behave in the same way, for example muscle will behave very differently to liver when struck by a bullet.

The passage of a bullet will produce two effects, a permanent wound track but also a temporary cavity somewhat larger than the diameter of the bullet. This is produced by the bullet imparting KE to the surrounding tissue, flinging it away from the bullet's path in a radial direction.

This temporary cavity, which has a lifetime of 5 to 10 milliseconds from initial growth to collapse, undergoes a series of gradually smaller pulsations before it finally disappears, leaving the permanent wound track.

All bullet injuries will produce a temporary cavity, but it is important to appreciate that the temporary cavity produced by the passage of a rifle bullet is much larger than that produced by a pistol bullet, provided that the projectile remains shape-stable during the period in question.

A rifle bullet such as the 7.62x39mmM43 considered in this case is of a type that is not designed to deform in a reproducible or predictable manner.

Rather it will penetrate the tissues of the body and thereby be retarded. After a short distance it will become unstable and will start to tumble and it is at this point that it will present its maximum surface area to the surrounding tissues.

At this point the retardation will be at its maximum, the rate of energy transfer will be at its highest and the size of the temporary cavity will be at its maximum.

In the case of a head wound, the typical result is a bursting rupture of the skull and the position of the exit wound will often be difficult to locate because of the massive destruction. Large pieces of the skull will be blown away and the skull will show massive fracturing.

In the case of a weapon held in tight or near contact, then the wounding effects resulting from the bullet's energy and instability will be combined with a component from the high pressure gas produced by combustion of the propellant. This gas begins to expand as soon as it emerges from the muzzle of the weapon and will follow the bullet into the wound track, contributing to the explosive nature of the observed wound.

Gunshot Residue (GSR) will be present in the wound channel and can be observed as blackening. It is often associated with particulate residue from the cartridge propellant. In tight contact, with the muzzle of the gun making an essentially gastight seal with the skin, the entry wound may appear clean and exhibit little more than an abrasion ring.

With the muzzle of the gun in loose contact with the skin, then GSR will be present on the outer surface of the skin, and will again manifest as a heavily blackened area around the bullet entry site, and particulate propellant particles may be observed driven into the skin, producing an effect known as 'Powder Tattooing'.

The entry site itself will demonstrate an abraded margin and if the weapon is at an angle to the tissue when discharged, this margin may appear somewhat elliptical.

The high-pressure gas generated in a high-velocity rifle will often produce a stellate tear around the entry site itself, when the gun is in tight or loose contact. The skin tissue is unable to stretch sufficiently and it tears in a radial manner away from the entry site.

In distant wounds, where the muzzle of the weapon is some distance from the body, the high-pressure gas and the particulate propellant residue are dispersed to the atmosphere and the entry site will be represented by a simple hole with an abrasion margin.

The Chemistry of Ammunition and Gunshot Residue (GSR)

Modern pistol, rifle and shotgun ammunition is composed of four major components:

- 1. The cartridge case
- 2. The projectile (bullet or shot charge)
- 3. The propellant

4. The primer

The primer is that part of the cartridge assembly that is struck by the firing pin; the composition ignites and sends a jet of flame into the propellant charge. This in turn ignites, generating a large volume of gas at high pressure and propelling the projectile from the cartridge case, into the barrel and ultimately from the gun.

When studying ammunition chemistry, the propellant and the primer are the two significant components.

Propellant is typically formulated based on nitrocellulose, sometimes with nitroglycerine and with moderators to control the burning rate inside the gun. The residues from the combustion of the propellant are therefore essentially organic in nature, together with the presence of nitrites.

Primer chemistry, however, is based largely on inorganic chemicals, and a standard and very widely distributed formulation is based on a mix of lead, barium and antimony compounds. In this typical mix, the chemicals are:

- Lead styphnate; an explosive sensitive to friction and impact.
- Barium Nitrate; an oxidising agent.
- · Antimony Sulphide; a fuel for the reaction

As with propellants, the above mix may be modified with the addition of compounds based on chemicals such as silicon, calcium and tin.

In classical analysis for GSR, inorganic analysis is employed and the detection of lead, barium and antimony in the one sample is regarded as supportive of the presence of GSR.

The presence of GSR on samples taken from a person involved in a shooting incident can be interpreted in the following ways:

- The suspect fired the weapon.
- The suspect was in close proximity to a weapon when it was discharged.
- The suspect has been in direct contact with a source of GSR, for example he
 may have handled a fired gun or ammunition, or have received GSR particles
 from other secondary transfer.

• In the case of a self-inflicted wound causing death, GSR is likely to be present in high concentration and will remain stable until disturbed.

Analytical Results and Observations

On Friday 27th May 2011, I received a copy of the report from Lionel Liberona TOBAR, Chemical Analytical Expert with the Policia de Investigationes de Chile (PDI), relating to results from his analysis of the various samples taken from the remains of Dr Allende earlier in the week (page 6 of this report).

In this report, Senor Tobar lists the samples that he took. He states that he analysed them using the technique of Inductively Coupled Plasma Mass Spectrometry, analysing for the presence of Lead, Barium, Antimony, Copper and Zinc.

In **Exhibit no. 3**, he detected evidence of the presence of lead, barium and antimony, whose concentrations are compatible with a ballistic projectile entrance site produced at short distance.

In samples lifted from **Exhibits 54**, **4 internal zone**, **13 internal zone** and **14 external zone**, he detected evidence of the presence of copper, zinc, antimony, barium and lead, whose concentrations are compatible with the residues of a ballistic projectile impact, but that it is not possible to infer if it is a projectile entry or exit, in view of the exposure to **Exhibit no. 3** above and the potential for cross-contamination.

Other analytical samples taken by Senor Tobar were negative for the components of gunshot residue.

The jumper, referred to on page 6 of this report, showed areas of possible damage or post-burial degeneration.

I undertook a chemical test for the presence of lead, which is a major component of gunshot residue, on the jumper.

The test results were negative and I am satisfied that the changes to the fabric that I observed were not associated with firearms damage.

The other items of clothing were not damaged.

I also tested the hair, taken from the burial casket, chemically for the presence of lead. This test was also negative.

I was shown the reconstructed skull, undertaken by Senor Angel Medina Bejarano, and could see that the lower mandible exhibited major fractures and that the skull was extensively fractured, with large areas of bone missing in the upper posterior region.

I discussed the appearance of the skull with Dr Ubelaker, Senor Bejarano, Dra. Morales and others present.

Later on the afternoon of 27th May 2011, I received a specimen AK-47 assault rifle, with sample ammunition, from the PDI and I was able to demonstrate to those present the dimensions of the gun and its mode of operation.

I demonstrated how it would be possible to hold the weapon under the chin, with the firing hand on the trigger and the forward part of the gun supported by the left hand, grasped around the barrel and gas port area.

With the weapon held in this way it is highly probable that the left hand would show significant gunshot residue deposits.

Conclusions

- 1. The bones of the skull showed extensive fractures, with large areas of bone missing from the upper posterior region of the skull.
- 2. The lower jawbone exhibited major fractures.
- 3. I saw no evidence of a direct bullet entry site passing through bone.
- 4. There was no evidence of the exact position of a bullet exit site.
- 5. The bone fracture pattern was entirely consistent with the passage of a high-velocity rifle bullet.
- 6. The bone fracture pattern was inconsistent with the passage of a pistol or other handgun bullet.
- 7. There was no evidence of ballistic damage to bones other than those of the head.
- 8. There was no evidence of ballistic damage to the clothing.

9. The analytical results are consistent with gunshot residue (GSR) from a

short-range bullet entry wound under the chin and an exit wound to the

upper posterior region of the skull.

10. The absence of detectable GSR on the hair sample can be explained by the

procedures at the first autopsy, where the body would have been washed.

This activity readily removes surfaces deposits such as GSR.

11. The analytical results support the proposition that the causative weapon was

held by the left hand.

12. No other GSR of significance was detected.

13. Two rounds will be discharged from an AK-47, when set on fully automatic,

in 0.2 seconds (200 milliseconds).

14. Cartridge cases will be ejected to the right of the weapon.

15. The observed damage to the skull is caused by one event, which may involve

one or multiple missiles.

16. Further interpretation would be speculative at this point, in view of the very

dynamic nature of the event in question.

17. On exiting the skull, projectiles would retain sufficient energy to impact with

other surfaces and be recovered at some distance from the site of primary

impact.

Signed Date 19th July 2011

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