

B Hayes

10-12-75 1.

**CONFIDENTIAL**

COMMENTS RE BRADFORD REPORT.

SECTION D. Page 4.

In line 32, Bradford points out that IF a deep gouge groove in the ~~EXAMINER'S~~ comparison of 52 and 54 can be determined to be from an individual characteristic, then there is an identification between 47 and 54 as well as between 52 and 54. It would be interesting to enquire into just how Bradford proposes to make such a determination. A true individual characteristic of a type used for firearms identification MUST be a mark engraved on a bullet as a result of the bullet having traveled through the bore of a weapon. A defect in the rifling of the bore may engrave itself on to the surface of the bullet as it slides along the rifling. A mark on the surface of a bullet, even though it may be in the right position on the bullet (ie. not, for example on the base, ogive or nose.) cannot properly be designated as an individual characteristic until it has been shown that it relates directly to one particular defect in the rifling. If one or more test bullets pass through the bore of a weapon and they all show this same mark in the same position on the test(s) bullets, then, other factors being also favorable, the mark in question can be designated an individual characteristic of that particular weapon.

Thus, just any mark on the surface of a bullet, even though in a position suggestive of a bore engraving, may actually not be a true individual identifying characteristic of a particular weapon. It may be nothing more than a "potential individual characteristic". It is likely that Bradford is in fact thinking of this gouge in 52/54 as only a potential individual characteristic and that is what he has in mind when he uses the qualifying word "IF" in this portion of his report.

From the bullet alone I take a dim view of making a determination of an individual characteristic. By comparing such a mark with some similar mark on one or more test bullets from a KNOWN weapon, then a judgement can very probably be reached as to the identifying potential of such a mark. SINCE THE MARK DOES NOT RELATE TO THE SIRHAN X GUN, then what are we going to use as the KNOWN WEAPON. What about HL8602 - no, that weapon has been destroyed and no one will ever be able to check any of its characteristics.

I have not had the chance to study the photomicrographs of this potential matching between 47/54 and 52/54 so I can give no final opinion as to the quality of these matches. I will point out that although the examiners seem to hold out the possibility that my measurements of rifling angle may be seriously in error due to the fact that both 47 and 54 have suffered some discernible impact damage, at least Bradford seems to ignore the fact that the same bullet deformation from impact may have had some adverse effects on his matching of the deep groove gouge on the 52/54 comparison.

I should point out that I am somewhat confused by the sentence starting at the bottom of Page 4. Does the deep gouge relating 52 and 54 also extend into 47, or is it just between 52 and 54. This will be cleared-up, I assume when I see the photomicrographs.

4

E

SECTION K. Page 6.

This section raises many interesting questions which should be directed to Wolfer. In regard to Special Exhibit 10, why was this photomicrograph made? (apparently to establish an identification between two bullets - what other reason could justify the taking of such a photo? ) Wolfer must have seen what he thought was an ID, otherwise why would the negative been made in the first place? What other negatives were made at this time? Were any of them used for prints in the Sirhan trial? Is it possible that in a major case of this magnitude that only ONE comparison photomicrograph was made? (I understand that a Jim ~~Wolfer~~ <sup>Watson</sup> from the Photo Section of LAPD made this one photo. He knows nothing about Firearms Identification, so Wolfer would have set-up the bullets on the comparison microscope and Watson would simply take the picture and process the film and make any prints. Other than the contact prints, were any enlargements prepared? Did Wolfer abort the photographic work because he or some else decided that the pictures failed to show any matching?

It will be recalled that in the Wolfer deposition (by Blehr) on Page 102, Wolfer testified that he had made NO photomicrographs of the Sirhan bullets. (CORRECTION: the name is Jim Watson - not Jim Weston.)

Also why did Wolfer select 47 and 52 for this one picture? Did he halt further photography when he found that he could not get a "make" between these two bullets????? Does this photo ~~x~~ show any portion of what might be "deep groove gouge" previously mentioned ~~xx~~ on either 47 or 52????? (The correct land impression areas might not have ~~xx~~ been chosen for this photo which would show the deep groove.)

SECTION L. Page 6.

It is interesting to note that in this section at line 18, the possibility of a second gun is unlikely "unless it were of identical class characteristics as the Sirhan gun and using ammunition of class characteristics identical with the Sirhan ammunition." - In a conspiracy to murder it is probable that very careful planning would be involved. It would seem elementary that if two guns were to be used the plans would call for these guns to be identical as possible, as well as the ammunition. It is very unlikely that two entirely different guns would be used. Bradford's requirement would therefore seem to be something very ~~xxxxxxx~~ easy to achieve - two IJ revolvers could be expected, after proper checking of course to satisfy the above UNLESS remark. Without too much effort some other make of weapon might be located to use in place of one of the IJ revolvers. It is not entirely clear just how witness observations (line 16) is involved in these remarks.

W.W.H  
Oct. 12, 1975

5

B

Harper

### EXAMINATION PROCEDURES

1. The first examinations of the Balliscan photographs were devoted to the study of the test bullets of Exh. 55, in order to determine if possible the permanent identifying characteristics impressed by the rifling. There were no pre-fire phase marks on any of the three bullets. Attempts were made nevertheless to place the photographs in phase. The attempts met with failure.
2. Consideration was given to the possibility that Wolfer had been able to make such a compelling match (involving coarse lines, fine lines and contours) that he could abrogate the help of pre-fire phase marks. However, no such compelling matchings could be found between 55 and 47, 55 and 54, and 55 and 52. Likewise no matching was found between 47 and 54.
3. No identifying phase marks, such as India ink dots, were found on any of the bullets, test or evidence. Wolfer stated in his deposition that not only does he not use phase marks, he also does ~~not~~ put any identifying mark on the bullets he used in making his identifications.
4. In making detailed comparisons between photographs of test vs. test and test vs. evidence bullets the photographs may be cut lengthwise (along a line at right angles to the longitudinal axis of the bullet) and through a selected area where potential matching individual characteristics might exist. Sliding the cut portion of the photograph of one bullet along the photograph of the other bullet provides a means of checking possible matchings.
5. The resolving power of the camera is capable of demonstrating most of the "makes" in our experimental work, especial if they were good makes. This does not mean that we are entirely "weaned" from the comparison microscope. In the Sirhan case, as you may know, the rules were such that we were never able to bring a comparison microscope to the Clerk's office to examine the evidence bullets. Were it not for these Balliscan photographs we would have nothing to rely on about the identification other than Wolfer's words. Knowing from other cases that he has a tendency to match 3 or 4 purely accidental lines and call it a "make", there is every reason to be concerned about what he really did in the Sirhan case.

W.W.H

5-1-74

6

B

Bradford Report

205

grease on bullets



---

REPORT OF EVALUATION

---

FOR

Rose Lynn Mangan,  
4445 Highway 50 East  
Carson City, NV 89703

IN RE

SIRHAN-RFK EVIDENCE

August 6, 1994

---

Spec. Ex. # Chapter XXII 1-8 (pg 30)

7

*Forensic Scientist*  
*Consultant In Physical Evidence*

P O BOX 1148  
SAN JOSE, CA 95108

August 6, 1994

REPORT OF EVALUATION  
(No. 7182)

I. Reference Information

Submitted by: Rose Lynn Mangan  
4443 Highway 50 East  
Carson City, NV 89703

Re: SIRHAN--RFK EVIDENCE

II. Source of Material Evaluated

At the request of Rose Lynn Mangan, the following items were retrieved from the California State Archives and submitted for examination by staff member Nancy Zimmerman, who closely observed the handling and examination of each item:

1. EXHIBIT 47-----fired bullet from neck of RFK
2. EXHIBIT 52-----fired bullet from Goldstein
3. EXHIBIT 54-----fired bullet from Weisel
4. EXHIBIT 55-----fired bullets, test fired by Wolfer
5. EXHIBIT 75-A-----portion of a label
6. EXHIBIT 6-----REVOLVER, caliber .22,  
Iver Johnson, Cadet Model #H53725

The following item was submitted by Ms. Mangan:

7. Box, "Iver Johnson" inscribed on top

III. Purpose of the Evaluation

It was requested that the fired bullets be examined to determine whether or not any identification inscriptions are visible on the bases or noses of fired bullets defined as Items 1., 2., & 3. in Par. II. above.

201

It was also requested that the box (Item 7.) be examined to determine whether or not:

a. the label(Item 75-A) was originally attached to the box.

b. the gun(Item 6.) fits into the box in such a way as to account for the impressions and markings in the lid and bottom of the box.

IV. Results and Conclusions

The examination of the bullets proceeded with the use of a stereoscopic microscope.

The examination of fired bullet Items 1., 2., & 3. was thwarted by the presence of a glaze-like coating having the appearance of grease. The sides of the bullets have a heavy deposit of a white coating material, which combined with the glaze obscures the details of land and groove markings. The surfaces of the bases of Items 1. and 2. are covered with so much of this glaze material that an observation of engravings is not possible. The base of Item 3. has less glaze and the letters "LM?" are discernible. The third letter that is represented by "?" has the appearance of the first half of an "O".

The test fired bullets (Item 4.) have the same glazing and white coating that is present on Items 1., 2., & 3.

The revolver(Item 6.) fits into the box(Item 4.) in a manner that is consistent with its original containment.

The label(Item 75-A) was originally glued to the end of the box(Item 7.). The basis for this conclusion is that some of the glue and paper have remained on the box and a section of the glue has released from the box. The margin of this release pattern is irregular and constitutes a physical match between the box and the label.

V. Disposition of Submitted Material

All of the submitted items were immediately returned by hand to the respective submitters at the conclusion of the examination of each item.

  
LOWELL W. BRADFORD

(note - Wolfer met w. FBI DA, AG chief - DA's "the whole works" this shows Wolfer did not decide alone against NAA test)

1 in terms of tomorrow. I don't know that the Police Department  
2 is going to complete their search by tomorrow and it may be  
3 that that is not absolutely necessary in terms of our  
4 experts. Now, if we could question this expert as to the  
5 matters that we have here and any other matters that wouldn't  
6 require reference to exhibits that are not here, then perhaps  
7 we could conclude with him and then we would just have to  
8 depend on the LAPD to do the best they can to uncover these  
9 other matters.

10 MR. LEVINE: If that were uncovered I assume it would  
11 be made available to the experts and counsel?

12 THE COURT: I assume that would be agreeable. Talk to  
13 Mr. Morrow about that. It seems like a waste of time for all  
14 of us to insist on formalities as to matters of that sort.  
15 If we have to, we can. Proceed.

16 Q BY MR. LEVINE: Mr. Wolfer, do you know if a  
17 neutronic activation analysis was done of any of the evidence  
18 in this case?

19 A To my knowledge, no.

20 Q Did you --

21 A I mean I have to clarify that. I don't -- I  
22 never saw the bullets after they were entered into the Grand  
23 Jury. I'd have no knowledge, from that time on.

24 Q Mr. Wolfer, did you discuss a neutron activation  
25 analysis with anyone, with regard to this case?

26 A Yes, I did.

27 Q With whom did you discuss it?

28 A With several. I discussed that with the District

(Supplement VI, Ex. 16a)

75

1 Attorney, the Attorney General, everybody in the room, the  
2 FBI, our chief, the District Attorneys, the whole works.

3 Q When you say everybody that was in the room, was  
4 there one meeting at which this matter was discussed?

5 A Yes. Well, now, what do you call one meeting?

6 Q Was there one discussion?

7 A I later had discussion with Dr. Noguchi, if that  
8 is what you are referring to.

9 Q Was there a specific meeting at which a decision  
10 was made not to conduct a neutron activation analysis?

11 MR. BAZANICH: Your Honor, that assumes they made a  
12 decision.

13 THE COURT: Assuming it either was or wasn't. And he  
14 has indicated that it wasn't. So why do we need the detail?

15 MR. LEVINE: Well, it would appear, your Honor, that  
16 it may be helpful to the experts to understand why their  
17 decision was made; whether or not this is a customary  
18 practice, and it may be an important question, in this  
19 instance, as to whether such a test ought to be made or ought  
20 not to be made.

21 I believe they ought to consider the prior  
22 reasons.

23 THE COURT: Well, of course, the status of the science  
24 may have improved over the last seven years, so I don't know  
25 whether that would be controlling. And I assume that they  
26 would have their own independent opinion, based on an  
27 examination of the exhibits, as to whether or not it's  
28 feasible or whether or not it's desirable.

(Supplement VI, Ex. 16b)



75

1 MR. LEVINE: They may be able to evaluate whether,  
2 your Honor, whether the reasons that would obtain then, would  
3 obtain now.

4 THE COURT: Well, hopefully they are going to make  
5 their determinations independent of what Mr. Wolfer and the  
6 authorities did at that time. At least that is my understanding.  
7 This is going to be an independent determination, and so I  
8 don't see that that is going to be helpful, in other words,  
9 getting into the reasons why they did things, or didn't do  
10 things. That is sort of peripheral, and I think it gets  
11 us off on a tangent.

12 As to what they actually did, fine, and what is  
13 available. That might be helpful to the panel of experts,  
14 why certainly. But, I must remind counsel that we are not,  
15 you know, we are not retrying the Sirhan case.

16 MR. LEVINE: I understand that, your Honor.

17 THE COURT: All right.

18 Q BY MR. LEVINE: Mr. Wolfer, I'd like to direct  
19 your attention to Special Exhibit 4. The first paragraph of  
20 that exhibit refers to a trajectory study which is made of  
21 physical evidence which indicated that eight shots were fired  
22 as follows.

23 The first question I'd like to ask you is whether  
24 this report -- strike that. I'm sorry. I'd like to --  
25 I'm sorry. I'd like to go down the specific bullets that  
26 were discussed in this report, all of which were introduced  
27 in evidence in this trial --

28 MR. BOZANICH: Your Honor, that is a misstatement on the

(Supplement II, Ex. 16c)

12

35