Dear Dick,

Relet 10: if I didn't ell you the source on Frazier, it is his N.O. testimony. Your have not said whether you'd want a copy. I presumed you'd went one and so told Faul Hoch, who is doing the copying. Also available will be Dinck's Let one of us know, preferable Paul, if you are not in touch with him, Gary of me, whichever you mext write, and we ll tell Paul. The total cost will not exceed 5d a page. I was sensitive to this point because F was careful to make no mention of where he got the sample, as he did on the jacket. Of course, it would have had but a single origin. Now we can come close to accounting for 100 of what could be missing from 599 and still not be able to include the recovered fragments. As you may not recell, I've been trying to get access to the spectro since May of 1966, I hope Bud will agree to add this to my suit. I expect to see him this week. This is a different approach than John's. On the samples you've made, what I'd like is for you to keep them in case I want them and, if you can have a good picture made, get that instead. One of us should have pix of 399 clear enough to take the required nelerging to show the strictions ... If you recall my handling of this in PM, you see and added significance ... And could this not be an explanation of Roffman's intelligence, that a fragment fell off? BEFORE my pix were made? I am clear on this, for I had access to Timk's and regarded them as inadequate and incompetent, didn t even get a set.

TSBD boxes: My recollection can be in error, but it is that:

Alyea was the only photographer in the TSBD immediately. Others later got in. He couldn't get out, tossed his film out as he made it. The News is the a.m. paper, so it could not have published such a picture 11/22.

Steudbaker testified all the boxes were moved before he took any pix. Not one-not even 716, shows the correct positioning. I recall no single picture that was taken before the boxes were moved. Joel Palmer had my excerpts from the Alyes footage, so I cannot check that. He has just letched onto it.

On the data on the dents, ejection pattern, etc: tehnks, and agreed, on most. I remain convinced the one place no shot originated is that window.

Fragments then would not show on X-rays.

Back wound: agreed, this is what Wecht says. What we do not have is proof these slides were made from sections of that wound. We know we have no basis for trust of those who are its source. Is it in protocol? It is n panel report, as I recall... On what can remain, reread PM III or the dissembling. We have no way of knowing.

Sulfur cast: excellent point. I do nor recall testimony on it.

When you can, please explain ""Anybody who asserts otherwise (that one head hit from behind) is in trouble to explain things that can ot be explained except as the result of a head hit from behind ". What are these things? I am certain of the front one, believe it possible there was a rear body hit not accounted for. What is irrefutable about a rear head hit?

Zep slides: through Gary is best, as you say. He ll know what I've gotten from him. On Nix and Muchmore, all that interest me now are shots showing the body going backward...I've already told Gary which of his I'd like, so again he'll known. What he doesn't have he can get made for both or, if you can get done for less, indicate which to you. It is best to make from original, tho....Connellys: are they at all discernable in X334ff? They take up some space. I didn't see them.

I havemeny things noted to call to your attention in Frazier's testimony, wherear I can get to do those notes. Much will excite you. This is from 161:

Q. Did you remove any of the parts or any scrapings from Exhibit 399 to run any particular tests?

A Yes, there were both particles of copper and lead base removed for a spectrographic analysis.

Thanks for new date on collimator and "Site-A-Line"

Carrico's testimony, "We opened..." He does not say either unbuttoned or removed. I still believ those are scalpel suts, as I have from the first.

In heste,

CC Schoener

Harold:

I received several of yours today. Will answer the most important

parts-- some really/ jazz me.

Wieght of CE 399: Your information that Frazier took a Fragment from the core throws me for a loop; it may be the solution to something that has puzzled me much. I had not mentioned it before because I did not know precisely what to make of it. What follows are my thanks thoughts before getting your info that Frazier took a Fragment from the core.

I have Roffman's picture showing the base of 399. On that whole surface there is but one place where the bullet could have lost substance: it is a conical crater at about the middle of the base (Your picture will show it, for it is relatively large, takes up about a third of the diameter of the base). I could not figure out what canadakharararar could have caused the crater, it it were caused during or at the end of the bullet's flight. The crater has the appearance of being gouged out with the point of a knife, and I supposed that if it had occurred while the bullet was in flight or at the end of flight, then the bullet must have tumbled and (still muinwim rotating) have spun onto a sharp object that bored into the base and took some weight from it. Otherwise, I thought, it had to have been taken out with the point of a knife.

Understand this: thre is no other place on the base of the bullet from which the substance can have come. This is evident even in my picture. I suspect that a closer and clearer picture of that crater will show striations which indicate the rotating movement of

the pointed object that took the substance away.

It's very clear. If you are sure that Frazier removed lead from the core, then that surely is the place from where he took it. The crater, then, would be Frazier's doing,

When I get home, I'll try to reproduce the marks that Frazier & caused by the removal of substance (from nose and base) and will weigh the results.

Boxes in TSBD: Evidence for the 3-box stack comes not from Dallas police photos, but from photos by newsmen who took pictures before the boxes were moved. All police reconstructions are wrong. The only police photo that shows the correct positioning is CE 716 (and other identical exhibits which may be somewhat clearer). The xxxx . stack is in the lower left corner (probably clearer in other photos than the CE I cited).

One of the News photos was published on 22 November in a special edition of the Dallas Morning News. Another is in Four Days.

are others, too, but I can't remember where.

No matter what confused testimony says, I feel sure that there was a three-box stack, not a two-box stack with another box in front, as the WC wants us to believe.

Dents on cartridge cases: Distinguish between case mouth dents (which is what we reproduced in ejection) and shoulder dents (which we did not reproduce, and whose cause we still do not know). CE543 is the only case that has the case mouth dent-- 544 and 545 do not have it. Presuming that rifle C2766 (the evidence rifle) always causes case mouth dents in ejecting cartridge cases with normally vigorous force, then it is safe to say that 543 was ejected normally, but 544 and 545 were ejected with less then normal force -- certainty less than the force required in working the bolt as fast as it can go.

Ejection pattern: In tests with your rifle, cases always were cast directly to the right side. I can think of no circumstance under which they might be ejected backward.

Firing with cardboard box as a rest would not disrupt the sight pattern as would firing from a hard object. Cardboard box is not hard enough to make a difference. It is a good rest.

Understand that as I propose possibilities, I do not necessarily believe that they apply. I don't think "Oswald's" rifle was used in the assassination, but I do consider it possible that a shot from another rifle originated from the sixth floor window, or at least from somewhere in the TSED.

Frangible bullets: When I say this I mean normal lead core, semi-jacketed, soft nose or hollow wint points moving at a velocity of more than 3500 feet per second. Such bullets can and usually do burst we immediately after contact with soft flesh and almost certainly would fragment on contact with cartilege of the traches. Of the two shots that I am sure originated from the front, I think both (front-neck and head) were normal varminting calibers. The .22 Hornet is a poor example; it has some of the properties of the cartridges that I have in mind, but is a little too slow. .243 is a good example in its lighter (80 grain) load. But it is only an example— others can do the same type of damage.

I tend to visualize a heavier, slower bullet from firing that

originated from behind.

JFK back wound: Presence of copper on clothing is not the only positive indication that this is entrance. Histological slides of tissue taken from the margin of this wound indicated a phenomenon known as coagulation necrosis, something which (according to Wecht in his article in Thompson's book) is positive proof of entry. Other things associated with this wound also are positive indications: the abrasion aroung the margin of the wound (in its spinning into skin the friction of the bullet actually causes a slight burning of the flesh at the margins of an entrance wound-- never happens with exit wound).

Also there is Glen Bennett's report that he saw a bullet strike FEK in the back. This would be at least at the second shot, since Bennet was not looking in JFK's direction until after Z202 (the first

shot had to have occurred before Z195).

I can't say where the back bullet went. It would not surprize me to learn either that it is still there or that it was recovered from the back. But the fact is, I don't know and can't really guess. However, if the information on the back wound is correct, then I am sure that it went in.

## , 11 Sept 69

Weight of CE 399: Further on this: Last night I diddled with some lead bullets, and I am now more than ever convinced that the conical crater at the base of 399 was hand made. I was able to reproduce the crater exactly by taking a fragment with the tip of a very pointed knife-- not gouging it out, but turning the point in the lead. The clincher is the tiny irregular lump at the bottom of the crater-- I kniking produced this every time. The cross-section of the crater at the base of 399 looks like this (same type of crater in my attempts):



I weighed fragments that I took, and estimate that Frazier took, in all (from nose and base) no more than one grain of weight(in

copper and lead) from CE 399.

I think this question is settled. If anyone wants to assert that the crater was produced during the flight of the bullet, they will have to explain what sharply pointed object produced it. I have no doubt that it was made by hand with a sharply pointed knife.

If you ask for them, I'll send you samples of the similar craters that I can produce. It is easy enough, so that you can

even do it yourself.

Sulfur cast: This xx is something I have not mentioned before,

but you may wish to consider it.

CE 540 is a sulfur cast of the bore of the evidence rifle. Frazier made this cast of the bore to determine the bore size before

test firing the rifle.

If there is any question whether the rifle was fired, this cast may settle the issue. The cast would have picked up debris from inside the rifle bore near the muzzle, where the cast was made. If the debris includes burned gunpowder, then it indicates that the rifle was fired, though not necessarily at the time of the assassination. If the debris does not include traces of burned gunpowder, then the rifle was not fired at the time of the assassination. The examination would require chemical analysis that I cannot describe.

As I recall, there is nothing in the published record which indicates whether or not the rifle was fired -- only Hoover's infothat the gun was well oiled, which may not relate to the condition

of the rifle bore.

Collimator: Your confusion about spelling is a reflection of my own. Enclosed are two things that will answer all that you want to know: an article about the new Bushnell collimator (with good account of the collimator's limitations -- read it) and an ad for Sight-A-Line.

Corbett article on barrel vibration: Treat this a s your own and do with it whatever yoy like: burn it, eat it, wipe your ass with it, anything. I forsee no use for it, so do not think of ever returning it.

Thunderbolt: I do not get this, although I plan to later when get some extra cash. If I do, and interesting stuff comes my way, I'll send it.

My Gouncilar comes slower than yours, so I know no more than you about what they write.

Frangible bullets from the front (again): Do not abandon this concept, for it is not necessary to think of unusual types of bullets like the murcury fulminate(which I do not believe). The "30 or 40" (probably more) dust-like particles of metal in JFK's head strongly indicate very high velocity disintegrating bullet. The concentration of these particles in the right-front of the head is further indication of origin of the shot from right-front, for these tiny particles have little force after the initial bursting and they never penetrate far.

Moreover, these dust-like particles exclude the possibility that they were caused by a military round like CE399, for the military rounds do not and cannot disintegrate that way. I think that the double head hit idea is true, but that the second of the two hits (the one from the right front) was done with a frangible bullet.

I think it absolutely certain that JFK was hit in the head from behind. Anybody who asserts otherwise is in trouble to explain things that cannot be explained except as the result of a hed hit from behind. They are in as much trouble as any who would try to assert that he was not also hit in the head by a shot from the right-front (mostly right). The head hit from the back came instantly before the head hit from the front. Josiah Thompson's account of the double head hit is weak, but I am sure that it is true -- absolutely sure.

.22 rimfire and centerfire: .22 Short. Long, anf Long Rifle, and .22 Magnum are all rimfire and comparatively weak. Except for the .22 Hornet, the .22 centerfires have 3-digit designations (depending on the design of the cartridge, not of the bullet) like 222, 222 Magnum, 223, 224, 225. These are fast, light bullets (about 50-55 grains) that have devastating, explosive effect. The buttle that is used in the M-16 rifle in Vietnam, for example, is designated 5.6mm, but its civilain counterpart (with soft nose or hollow point) is the 223 Remington. Except that the .223 uses a frangible bullet, the two cartridges are exactly the same. With the great velocity that this bullet achieves, even the hard military round is a devastating killer.

Zapruder slides: I will send you all that I have, good color copies taken from Life and Paris Match, but I must charge you the cost of the film -- about #3.50 for mxxx 20 slides. Unless I hear otherwise from you, I will make the slides at the beginning of next

month (when I get paid) and deduct the amount from what I owe you.

Do you want slides of other things besides Zapruder? I have a
few good color prints of frames from Nix, Muchmore, and all the
Life has printed. Other things, too, but so numreous that I can't
list them here. How about Ray Marcus' version of the Moorman photo and blow-ups of the persons behind the stone wall on the lanoll?

Don't ask Schoener for slides yet. Let me make copies of what I have; I'll then send them to Gary, not to you. He can look them over and see if he has stuff to fill gaps in that I send. This process would waste a little time, but will same the expense or reduplication . I do not know the quality of slides that Gary might get; mine are firs rate, and I cannot imagine getting better.

My making slides will have to wait until the end of the month,

for I do not have extra cash now.

Connallys in Zapruder: The Connaltys are not clearly discernible in Z frames after Z334, but what happens is clear: C falls backward onto Mrs C's lap. She leans over and covers him with her body. I have (in B/W) that dreadful frame that shows the agony of Mrs JFK's face just before she climbs over the trunk of the car.

I think that covers most of what is in your recent letters. The business of finding where the weight of CE 399 went is most exciting. If it is handy, please send me the reference indicatin that Frazier took a sample from the core.

> Dick Bernabei