

1

Tuesday, 29th September 2009

2 (Afternoon session)

3 (2.00 pm)

4 **GEOFFREY ERIC GRIGG (continued)**

5 **Further examined by MR MOYNIHAN**

6 MR MOYNIHAN: Mr Grigg, I'm now about to turn to points 7

7 and 8 in your own list of differences and if I could

8 again bring up a copy of FI0168A and have that twice,

9 what I am going to do is do the usual. Give us a copy

10 of Y7 on one side of the screen and a copy of Ms McKie's

11 print on the other and with that introduction, leave you

12 to take over so that you can explain your points of

13 difference 7 and 8 for me, please, in whichever order it

14 is more convenient to you.

15 A. Yes. I would like to point out I had trouble marking

16 these points on the chart because of their relative

17 positions on the two prints. Hence the order is

18 actually reversed on the picture of Y7. I've had to

19 draw the exit line to point 8 above the exit line to

20 point 7 as it appears on the fingerprint of Shirley

21 McKie's left thumb. This is because of the difficulty I

22 had actually aligning apparent similarities between two

23 prints in order to describe them.

24 Point 7, if I can start with that, the earliest

25 number, is a downwards bifurcation, three intervening

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1 ridges to the right of point 2. If I can enlarge that
2 area of Y7 and I will draw a red arrow to show the
3 position of point 2, which I have already mentioned, and
4 then if I go three intervening ridges to the right --
5 one, two, three -- I come to this feature, another
6 bifurcation, which I have labelled as 7.

7 In between those two, one intervening ridge to the
8 left we have another bifurcation which is in fact
9 point 8. If we follow the ridge from point 8 upwards,
10 we come to the ridge ending which I have already
11 labelled as point 3 and I will put a red arrow on that
12 one as well (**indicated**). So we have a little cluster of
13 characteristics here to the right of the core which is
14 fairly distinctive.

15 When we look at the thumbprint of Shirley McKie, and
16 if I can enlarge a similar area, if I start with
17 indicating point 2, again which is this bifurcation here
18 (**indicated**) which I will just put a red arrow on to the
19 right of the core, I count across the three intervening
20 ridges, I come to a ridge ending. Now, it appears to be
21 a bifurcation. It appears to be joined to the ridge on
22 the left but if the ridge count is to be right, then
23 I've got to change one of the features to make them
24 agree.

25 If I come back that one intervening ridge from

1 there, I come to a point on this ridge here
2 **(indicated)** -- I have just put an arrow along the line
3 of the ridge -- where point 8 should be but there is
4 nothing on that ridge at all. It's a plain ridge. If I
5 follow the ridge upwards, I come to a bifurcation which
6 could be construed as a ridge ending in the same
7 position or similar position to the point number 3 which
8 I've already mentioned.

9 Superficially this little cluster of features could
10 be confused but they are actually very different. If I
11 move outwards from this point 7 on Y7, I have a plain
12 ridge and I will mark this time not with an arrow but
13 with a plain blue line. I will put a straight line down
14 it. There is no feature on that ridge.

15 If I come out one intervening ridge on the
16 thumbprint, we come down the ridge, we find there's a
17 bifurcation on that ridge halfway down the blue line
18 I've just drawn.

19 Potentially, it looks like this feature here is the
20 feature which appears on the blue line on the
21 thumbprint. If I count across one ridge, I come to a
22 bifurcation --

23 Q. Sorry, I am already having a little bit of problem
24 following just the numberings.

25 Could I ask you, please, just if we could go back a

1 little and, maybe in green, what I would like to do is
2 just to number the arrows so that we know the points you
3 are referring to. If you could just tell me the numbers
4 that correspond to your own points and starting at about
5 ten to the hour on the left-hand what point is that?

6 A. That is point number 2 on my chart.

7 Q. With any luck I can write 2?

8 A. This is point number 3 on my chart.

9 Q. Then this one (**indicated**).

10 A. The red arrow pointing down to the right on the
11 right-hand side is point number 7.

12 Q. So this is 7 (**indicated**).

13 A. And the other red arrow is number 8.

14 Q. My best 5-year old's writing, I think. Are the numbers
15 are in the same order --

16 A. Yes, this is number 2, number 3, number 7, and number 8.

17 Q. I am sorry, you were saying you wanted to move on.

18 A. Yes. If I move from point 7 across to the right one
19 intervening ridge on the thumbprint of Ms McKie there is
20 a bifurcation present. If we move across to the
21 equivalent ridge the same distance on Y7 we have a plain
22 ridge. The feature is not there.

23 What I was about to say was the relationship between
24 this bifurcation on the thumbprint --

25 THE CHAIRMAN: That is the one marked with the blue line?

1 A. That's correct, and point number 7 to the left of it is
2 the same as the relationship on Y7 between 7 and 8, one
3 intervening ridge between them. It's possible those
4 could be confused as being the same.

5 If we move up to point 3, we can see that on Y7 we
6 have a clear bifurcation where the ridge splits equally
7 on both sides of the central axis of the ridge and
8 follow up we come to a ridge ending.

9 If we look on point 7 on the thumbprint on the
10 assumption that they're the same feature, in actual fact
11 the bifurcation is all on the right-hand side of the
12 ridge. The actual ridge carries through in a virtually
13 smooth line and there is a pronounced shoulder where the
14 bifurcation would split off on the right-hand side.
15 This has a very different appearance to the feature
16 marked as 7 on Y7.

17 If we follow that ridge up on the assumption that
18 that is in fact the same feature as the one marked as 8
19 on Y7, we come to a bifurcation where the ridge bends
20 sharply to join the ridge on the left; whereas on Y7,
21 point number 3 is not joined to the ridge on the left;
22 it's a ridge ending.

23 MR MOYNIHAN: Can we just save that, please.

24 MISS BAHRAMI: That's FI2909.18.

25 MR MOYNIHAN: I am going to start with it and ask you just

1 to reconsider something.

2 What I would like you to do, please, is to look at
3 the SCRO charting and in the SCRO charting what I would
4 ask you to look for -- beginning with Ms McKie's
5 fingerprint and look at their 4 and 5.

6 A. Yes.

7 Q. I think everyone in the hall has this in paper form.
8 What you have as 7 and 3 in Ms McKie's print, they have
9 as 4 and 5?

10 A. I think I have as 8 and 3.

11 Q. This is what I am wondering about because if what I am
12 looking at is a double step bifurcation, the lower
13 right-hand most step of that bifurcation, at least on
14 what I can see, is SCRO point number 4?

15 A. Yes, I agree with that.

16 Q. So your 7 as drawn in Ms McKie's print is the SCRO
17 point 4, yes?

18 A. No. My number 7 would be the SCRO point 3, I think.

19 Q. This is what I just want you to look at. What I see
20 that you have drawn as number 7 you have said could be a
21 ridge ending or it could be a bifurcation.

22 A. Yes.

23 Q. Let us assume for the sake of argument that it is a
24 bifurcation. What we have is, at point 7, one
25 bifurcation with the left-most ridge carrying on up and

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1 forming a second bifurcation above that you have marked
2 as 3.

3 A. Yes. I'm sorry, I confused myself with the difference
4 in the arrangement of the ridges. Indeed, on my chart
5 I've shown 8 as a plain ridge, of course. I've been
6 trying to align that with the SCRO chart which shows two
7 bifurcations. So you are right to pull me up on that.

8 Q. Your 7, which is the lower bifurcation, would be their
9 5?

10 A. No, I believe it would be their 4.

11 Q. I do apologise. Your 7 is their 4; your 3 is their 5?

12 A. Yes.

13 Q. What I want to do is I have a reasonably clear mental
14 picture myself but I would ask you to check in their Y7
15 because, if I understand it correctly, where they
16 suggest that the point they have as 4 is, in fact, if I
17 draw a circle, it is in the vicinity of what you have
18 drawn as 8?

19 A. Yes.

20 Q. The point that they have as 5, they would draw as in the
21 vicinity of your point 3?

22 A. Yes.

23 Q. That means that, in a way, they have shifted these
24 points to the left now to the arrows that I have put on
25 or the red arrows I have done they have shifted them to

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1 your 3 and 8, whereas you understood them to be 7 and 3.

2 Do you follow me?

3 A. I'm not sure I do.

4 Q. I have green numbers against arrows. I am now going to

5 have red numbers against circles. That is the position

6 on Y7 that SCRO has suggested these two points are?

7 A. Yes.

8 Q. To use your number, if I look at Ms McKie's print, the

9 double step bifurcation you have as 7 and 3 on your

10 print?

11 A. Yes.

12 Q. You intend to mark those by the arrows 7 and 3 on Y7?

13 A. No, because they're not the same. I can't mark them in

14 the same way on both prints because the features are

15 different. They appear in a different order and they

16 are different types, but they have a superficial

17 similarity and could easily be confused with each other.

18 This was the point I was trying to make.

19 Q. This is where it comes then, looking at the confusion,

20 because if, it might be argued against you, if you have

21 tried to make a relationship between point 7 in Y7 and

22 3, you are not comparing the correct features that would

23 coincide with your 7 and 3. What you ought to be

24 comparing, it would be suggested, is the red circle 4

25 and the green circle 5. 4 and 5, it would be suggested,

1 are the correct representation in Y7 of what you have
2 highlighted in Ms McKie as 7 and 3.

3 A. Well, I don't actually accept that.

4 Q. Could you explain to me then why you reject the
5 interpretation which would have on Ms McKie's print
6 (that's the one to the right of the screen) point 7 and
7 3 correctly positioned where I have put the 4 and 5 on
8 Y7 in circles?

9 A. First of all, you have to try and fix the position of
10 these characteristics within the overall pattern, the
11 overall ridge flow, which means finding a common datum
12 from which to start and that is very difficult with the
13 clarity of the print in the areas which might help us.

14 There are no features which are actually the same
15 which we can use as a starting point. The best position
16 to start is probably the core where we have the area or
17 recurve. On the enlargement here it is right on the
18 very left-hand edge of the print.

19 If I count from there, I have 1, 2, 3, 4, 5
20 intervening ridges before I come to this ridge ending
21 which I have labelled 3. If we try and do the same on
22 the fingerprint of Ms McKie, let us take that ridge
23 ending in the core -- well, we can't quite see it on the
24 left print ...

25 Q. If you give me just a second what I will do is -- when

1 you say take that. What I will do is put an arrow in.

2 I will leave you, sorry, just to mark it.

3 A. On this impression on the left, Y7, I am taking this
4 recurving ridge as being the same as this recurving
5 ridge around the core. We can't see this ridge ending
6 in the core which is very clear on the thumbprint. It's
7 not very clear, if in fact it exists at all, but this
8 appears to be innermost recurving ridge on both
9 impressions. From Y7 on that ridge I have 5 intervening
10 ridges before I come to a point I've labelled 3 as a
11 ridge ending.

12 On the thumbprint, we have 1, 2, 3, 4 intervening
13 ridges before we come to this bifurcation. If that is
14 to be joined-up, we have 4 on both sides so that would
15 tally, but we still have the form of this bifurcation
16 down bottom. It's not a shoulder as it appears on the
17 thumbprint. It is an equally spaced bifurcation and
18 equally on both sides.

19 Although there are features in very similar relative
20 positions, they are not the same type of feature in both
21 impressions.

22 Q. Just for clarity, if I draw a line in yellow -- I do not
23 intend this to be physically correct just so that I join
24 -- I'm drawing a yellow line within the red circle at 5.

25 Are you indicating that it could be a bifurcation in

1 that location?

2 A. It would have to be a bifurcation in that position to
3 match, yes.

4 Q. It would have to be a bifurcation in that location for
5 point 5 on the left to match as the bifurcation that --
6 point 5 and point 3 to match with the bifurcation you
7 have in number 3?

8 A. Yes.

9 Q. Then the ridge counts would be correct but you have a
10 problem about the shape of the bifurcation that you have
11 as 7 on Ms McKie's print and that I am suggesting to you
12 is number 4 in the red circle on Y7?

13 A. That is an interpretation if we join the top of the
14 ridges up together. I have to admit on my original
15 notes I had a difference in ridge count to the core
16 trying to replicate that here I made it the same so I
17 would have to study this image a bit more closely. The
18 bit I want is off the edge. I had five ridge counts on
19 Y7 ... I beg your pardon. **(Pause)**

20 No, I'm afraid I may have confused myself. I can't
21 find my ridge count on my notes.

22 Q. I was not really intending to reduce this down to a
23 point of confusion because what I wanted to do was to
24 step back from all of this.

25 First of all, could we save this image.

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1 MISS BAHRAMI: It's FI2909.19.

2 MR MOYNIHAN: Just before I return to my next port of call,
3 if I use the clearer Ms McKie print, because the clarity
4 is quite clear, you have indicated there what I might
5 call a cluster of four arguably bifurcations, if we make
6 your number 7 a bifurcation rather than a ridge ending,
7 a cluster of perhaps 4 bifurcations.

8 A. Yes.

9 Q. If we then return to what you did as your original
10 analysis, which I think is image FI2909.09. Perhaps if
11 I could keep on the right-hand side the image that is
12 currently displayed, keep on the right the one currently
13 displayed and bring up FI2909.09 on the left.

14 A. Can I just return to point number 3?

15 Q. If you give me a second. Yes, do you want to --

16 A. I was confused I think because you joined the ridge
17 ending on Y7 up to the ridge on the left which would
18 make the sequence ...

19 Q. If you give me just a second. What we will do in that
20 case is return to the last saved image.

21 A. I am sorry, I think I became confused because your
22 little yellow line on Y7 in circle 3 or circle 5 joins
23 up the ridge ending to the ridge on the left. It could
24 equally easily and just as likely join up with the ridge
25 on the right and I think that is the way I have seen it.

1 If it does join up, leaving point 8 on the left-hand
2 limb as I've marked it on the thumbprint of Y7 as
3 point 8 and then there is a difference in ridge count
4 from the core to this point of one. It was your yellow
5 line which confused me, I'm afraid.

6 THE CHAIRMAN: So the ridge count could be right or could be
7 incorrect depending on whether you have join as counsel
8 did the ridge to the left or to the right at point 5?

9 A. That's right.

10 MR MOYNIHAN: It is not my intent to confuse you. What I am
11 doing, you will readily see, is I am trying to draw by
12 that yellow line a configuration which would make Y7 fit
13 with your points 3 and 7 in the McKie print.

14 Do you see?

15 A. Yes, I accept that.

16 Q. Drawn in that way with the yellow line to the left, it
17 could fit?

18 A. Yes. Of course this is the wrong way to go about a
19 comparison.

20 Q. This is what I wanted you to comment on. Drawn with the
21 yellow line to the left, it could fit but that is a
22 convenient way of answering the problem about the ridge
23 count. What you are saying is you must have understood
24 that yellow line in fact to be thrown to the right
25 rather than left; in other words, to connect, if at all,

1 with the ridge to the right?

2 A. Point number 3 appears as a ridge ending on Y7. If you
3 want to make it a bifurcation, it could equally as well
4 go to either the ridge to the left or the ridge to the
5 right. To manipulate it is maybe to take the
6 information you want it to fit.

7 Q. You say this is going about it the wrong way. Can you
8 just explain to me why this is going about it in the
9 wrong way?

10 A. On Y7, point number 3 appears as a ridge ending. If we
11 follow the ridge ending down, we come to a very distinct
12 bifurcation which I have labelled number 8. On the
13 thumbprint, we should be looking for a ridge ending five
14 ridges from the core which, when we follow it down, we
15 come to a bifurcation.

16 What we have is a pair of bifurcations on Y7 which
17 are in the approximate same relationship and approximate
18 same position on the core and we have or you have taken
19 those as being the same features but you had to
20 manipulate them in order to make them fit in the
21 sequence that you wanted to and that is because it is
22 easy to see on Y7 and not so easy to see on -- I beg
23 your pardon, it easy to see on the print, on the
24 thumbprint but not so easy to see on Y7.

25 Q. You used the word manipulation and I intend nothing

1 sinister by that but we talked about the Ashbaugh
2 flip-flopping or, more technically correct perhaps,
3 iterative process.

4 Is what I have attempted to do by drawing in the
5 yellow line which would be manipulating to fit, is that
6 permissible flip-flopping or iterative process or is
7 that going beyond what you would regard as permissible?

8 A. It is always easy to confuse a ridge ending and
9 bifurcation. They can appear interchangeable at times
10 depending upon a number of factors but you have to look
11 at every characteristic within the totality of all the
12 other characteristics and when there are so many
13 characteristics which don't agree in their position and
14 sequence, it becomes futile to move one or two because
15 you don't affect the overall comparison. It's easier
16 and much more honest to say this doesn't fit in the
17 sequence of the whole fingerprint.

18 Q. I am very grateful to you because it was that, I think,
19 that provided the bridge then I was going to ask in
20 relation to your evidence back to I think -- I think we
21 have these saved, so that is okay.

22 If we go back to FI2909.09.

23 On the left-hand side, you drew for us at the start
24 of this particular chapter of your evidence to the right
25 of the core in the magenta circles three, I think,

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1 bifurcations lower down and a ridge ending higher up.

2 That is what we ultimately ended up looking at when we

3 looked in detail at various points.

4 A. Yes.

5 Q. I had asked you, as best you could recollect back to

6 your original investigation, you had seen perhaps about

7 three points in common and your recollection now is

8 slightly different from then. Were you thinking, at

9 least I am trying to understand as best you can what you

10 saw in your original investigation, of something in the

11 nature of those magenta circles as perhaps being points

12 in common?

13 A. I regret I can't. My memory was that there were

14 bifurcations in agreement higher up the print, perhaps

15 in the area with the long red arrow indicating what you

16 call the Rosetta point. I think my memory became

17 distorted over time between differences and

18 similarities.

19 Q. I think that is understandable in the circumstances.

20 As you say, if there are differences in the print is

21 your evidence, you had reached the point where you are

22 not going to manipulate the points that may be in

23 agreement because the points in difference really trump

24 the possible points of agreement. Is that correct?

25 A. Yes.

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1 Q. Now taking it all the way back to where we started, can
2 you indicate to his Lordship -- I have missed out one
3 point of difference that I perhaps will just miss
4 because we have time not available to us. That is your
5 point number 6. I think I will just leave that to the
6 side.

7 Perhaps if I could say this to you, Mr Grigg, up on
8 screen, just now we have one point -- point number 6,
9 that we have not discussed so far -- I have not asked
10 you about. Is that a significant point of itself or are
11 there other stronger points already on the screen that
12 we discussed in detail?

13 A. There are more significant differences. It might be
14 possible to argue that number 6 wouldn't even appear on
15 Y7 because of the orientation and it is towards the edge
16 of the print.

17 Q. In that case let us not waste any time this afternoon
18 with that.

19 Since we now have it displayed, what in your
20 judgment are the most significant differences?

21 A. The absence of the lake and the bifurcation above the
22 core, points 7, 10 and 11 on the SCRO chart; the
23 presence of the point I've labelled 4, the ridge ending
24 from the left, what you call the Rosetta point; the
25 absence of the bifurcation I've labelled as 5 on the

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1 thumbprint from fingerprint Y7; and indeed the position
2 and arrangement of the points we've just discussed 2, 7
3 and 8 and 3 down the bottom being superficially similar
4 but in actual fact different.

5 Q. So those are the significant differences. In conclusion
6 if I take this in stages, first of all, is there enough
7 detail in Y7, despite all its clarity problems, enough
8 detail to make it an acceptable print for comparison
9 purposes? Is it capable of identification?

10 A. Yes, to both questions. It is capable of
11 identification; it is capable of being compared.

12 Q. But your conclusion in relation to Ms McKie is it is not
13 Ms McKie but for the reasons you have just indicated.

14 A. Yes.

15 Q. I am grateful to you. That finishes Y7.

16 If I can turn then to Q12. For Q12 what I will
17 begin with is your own FI2 charting, FI0169A.

18 I will do as I normally do and give us on each half
19 of the screen Marion Ross's print and Q12.

20 If I start with this general question I'd ended Y7
21 with: in relation to Q12 is there enough detail on an
22 examination of Q12 to make it of sufficient quality to
23 carry forward an identification of any individual?

24 A. In order to answer that question, I think I would have
25 to see the fingerprint of the individual who actually

1 left the mark. As it stands, it is a very fragmented
2 mark. It is very difficult to align the different areas
3 where characteristics can be discerned to build up a
4 picture of the whole mark and how the different areas
5 fit together.

6 There are characteristics visible in different
7 places but whether they could be accurately linked to
8 each other by following the ridges through, counting
9 through in order to get sufficient in total over the
10 whole area to make a decision, I'm not sure.

11 Q. It may simply be the language I have used. I understand
12 in fingerprint laboratories that marks will be studied
13 to see whether they meet a standard which, I say, is of
14 comparable quality; in other words, enough detail to
15 make them a robust basis for a comparison with a field
16 of potential donors. I understand that some marks will
17 be excluded because the detail on them is just
18 insufficient for a reliable comparison.

19 What I was asking was whether your judgment of Q12
20 is that it would be discounted at the first stage as
21 comparing(**sic**) insufficient detail for comparison or
22 whether you would understand fingerprint examiners to be
23 prepared to work with it and compare it with possible
24 suspects?

25 A. I would expect given this is or this was a murder

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1 investigation for every single mark to be compared if it
2 could be and I would expect this mark Q12 to be
3 compared, as far as it could be, with any suspects who
4 were put forward.

5 Q. Again, the conclusion which you have reached is that
6 there are points of difference in Q12 such that you
7 would say positively this is not the mark of the
8 deceased, the late Marion Ross.

9 Is that correct?

10 A. Yes, these two fingerprints do not match.

11 Q. You have highlighted eight points of difference that, in
12 your judgment, mean that it cannot be the print of
13 Marion Ross?

14 A. That's correct.

15 Q. It is a question of just exactly how one works through
16 this particular print. One could look at it by simply
17 comparing the SCRO position with your own or one can do
18 it by looking at the way that you studied it. I think
19 what is probably better is if I ask you just to explain
20 your own, because I think your own one will begin with
21 Q12 as an analysis then linked to Marion Ross -- is that
22 correct --

23 A. Indeed.

24 Q. If you begin then if we take them in perhaps in any
25 logical order as best suits you. We could either begin

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1 at 1 or we could begin at 5 as being at the top of the
2 clock just as best suits you, what is your analysis of
3 Q12 that results in you saying it is not Marion Ross?

4 A. My analysis actually started with the actual pattern and
5 ridge flow which are very similar although I noted on
6 the left side of Q12 there is what I would call a
7 "funnelling" of the ridge flow. That is, if I can try
8 and draw on the picture to illustrate, we have the ridge
9 flow here and here (**indicated**). These two red lines are
10 the outside of a wide area of ridge flow at the bottom
11 narrowing down as we move towards the top of the
12 fingerprint. These ridges are funnelling together. The
13 ridge flow on the fingerprint doesn't show this
14 particular flow in that area.

15 However, given the broken nature of the print, the
16 fragmented nature of it, this might be just an artefact
17 of the way it has been left or developed or, indeed,
18 other marks which surround it because we can see there
19 are a number of marks on this particular item. That was
20 the first thing I noted.

21 The overall ridge flow appears very similar. They
22 are both whorl patterns. I have attempted to estimate
23 the ridge counts to the deltas on the outside and there
24 is nothing there to discount these as being the same
25 pattern and, therefore, it's worthy of carrying on the

1 comparison.

2 When I came to look at the actual features available
3 within the pattern, I noted that there are on the left
4 of the core about five characteristics, that I am
5 talking about I will just draw ...

6 Q. If you give me a second, I will save the image that's
7 there just now with the red lines and then remove those
8 so we have a clear image. So we will save the image
9 there and then come back.

10 THE CHAIRMAN: Just before we save the image, is it possible
11 on the inked print to mark the same what you would
12 regard as the equivalent ridges in the same form of the
13 red line?

14 A. We have the core here (**indicated**). It is very difficult
15 to count out because of the very poor clarity. About
16 eight ridges to the left ... so I'm looking maybe down
17 about there (**indicated**). Then if I estimate there are
18 about two or three ridges, it will be maybe this ridge
19 here (**indicated**).

20 THE CHAIRMAN: So that is as near as possible the
21 equivalent?

22 A. It is roughly equivalent.

23 THE CHAIRMAN: If you would like to save it now.

24 MISS BAHRAMI: FI2909.20.

25 MR MOYNIHAN: If you could bring up again two copies of

1 FI0169A.

2 Mr Grigg, if I pass the controls over to you just to
3 explain, as you wish, the points of difference that you
4 saw.

5 A. Thank you. I noticed that there were clusters of
6 characteristics in different areas. Perhaps the largest
7 and boldest area of the print is on the left-hand side
8 over here (**indicated**) to the left and slightly below the
9 core. Above that the ridge flow becomes very broken and
10 very faint but we come round to the top of the core, we
11 have another area of fairly well-defined ridges
12 extending down the right-hand side of the core where we
13 have a few more down here.

14 Again, between that bottom right-hand side and left
15 side, the ridges are fainter, they are broken, they are
16 disturbed by other contamination from the background
17 and, indeed, there's an area here where they are
18 completely missing, whether they come from this
19 fingerprint or any other fingerprint.

20 Perhaps if I can start with the point on the right
21 of the core which I've labelled 6. It is a very strong
22 bifurcation on QI2 and it can be fairly accurately
23 placed one ridge out from the core on the right.

24 When you look at the forefinger print we have a
25 bifurcation in exactly that position. However, the

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1 appearance of this bifurcation on the right is quite
2 different in that the two legs of the bifurcation, the
3 ridges that proceed downwards, have different
4 thicknesses. The one on the right is a thick ridge, as
5 thick as the ridges above the bifurcation before it
6 splits. The ridge on the left is very much thinner.

7 If we look at the bifurcation on Q12, we see that
8 both legs of that bifurcation are very similar in width
9 and the same width as the ridge above before it
10 bifurcates.

11 The reason why ridges might appear to have different
12 thicknesses is usually down to the pressure that is
13 being placed upon them, the amount the ridge has been
14 crushed as it has been placed on the surface. When you
15 have two ridges side-by-side they will have very similar
16 pressures on them, they would appear to be the same
17 thickness unless one ridge actually had a different
18 structure and was thinner than the corresponding ridge
19 on the other side of the bifurcation.

20 So this bifurcation on the forefinger print has this
21 very clear appearance of a thin ridge on the left and a
22 thicker ridge on the right. This will be the structure
23 of the ridge that makes up the bifurcation. The
24 bifurcation as it appears on my Q12 appears to have a
25 different structure in that both ridges are of similar

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1 widths, similar thicknesses. So although the
2 bifurcation appears in the right position on both prints
3 to match, the appearance of the bifurcation itself is
4 immediately causing me some concern about whether it is
5 the same feature or not. So immediately having found
6 that feature I'm wondering how close a match it's going
7 to be.

8 If I proceed downwards from point 6, I move one
9 intervening ridge to the right -- and it may be helpful
10 if I enlarge this image, and I will do the same with the
11 fingerprint -- if I move one intervening ridge to the
12 right and follow it down, I come to another bifurcation
13 on the next ridge out. This I've labelled number 7.

14 If I perform the same action on the fingerprint, one
15 intervening ridge, move one out, I indeed come to a
16 bifurcation. So we have two as superficially similar
17 features in the same relative position on both marks as
18 well as the pattern, but the appearance of this
19 bifurcation (**indicated**) is different to the one on Q12.

20 If I come further down --

21 Q. If I could just stop you there because at the point
22 where you were saying the appearance of the bifurcations
23 were different, you in fact were pointing the pencil
24 back up to your original point number 6.

25 A. Yes.

The Fingerprint Inquiry | Scotland

1 Q. Can you just explain, please, what it is about your
2 point number 7 or your points number 7 that leads you to
3 suggest that the appearance of the bifurcations are
4 different?

5 A. I was talking about number 6. We have two bifurcations
6 in apparent sequence which is a very good starting point
7 for the comparison. I was reiterating that one of them
8 has a different appearance on each mark.

9 If I follow from point 7 downwards and count out one
10 intervening ridge, I come to the point that I've marked
11 as 8, which is a bifurcation upwards. If I do the same
12 on the forefinger print, one intervening ridge, I come
13 to a feature which is best described as a crossover, a
14 short joining ridge which joins -- and if I can indicate
15 with two short blue arrows -- **(indicated)** a feature
16 where two adjoining ridges are joined by a short ridge
17 which crosses over from one ridge to the other.

18 THE CHAIRMAN: That is the two blue marks, the two blue
19 arrows point to --

20 A. I've just placed on the fingerprint.

21 On Q12 we have a bifurcation which I have marked as
22 point 8 which might correspond to the bifurcation which
23 I've marked with the lower blue arrow as forming the
24 lower point of the cross-over. If that is the case we
25 should see the other bifurcation at the top of the

The Fingerprint Inquiry | Scotland

1 cross-over but it doesn't exist on Q12. So although we
2 have two bifurcations which appear similar and a good
3 starting point, we move down to the next ridge out, I
4 find a different feature.

5 MR MOYNIHAN: Could we save that image?

6 MISS BAHRAMI: FI2909.21.

7 MR MOYNIHAN: What I will do is we do not have to go back to
8 a clean image, necessarily.

9 A. Can I keep this image, please, for the moment?

10 Q. Yes. I will leave you to it.

11 A. If I draw attention back to the bifurcation immediately
12 to the right of the core, which is point number 6, if we
13 follow the ridge upwards immediately above the core we
14 have the appearance of something which looks like a
15 small lake. The ridge is very much thicker. In fact,
16 if I can use my arrows again, I will just draw where I
17 see the ends of this thicker ridge arrangement with a
18 gap in the middle. This looks like a very small, tight
19 lake.

20 But if I follow the ridge on Q12 upwards above the
21 core, there is no indication of any little lake
22 formation. The ridge doesn't appear any thicker. The
23 ridges either side are much closer together. There is
24 no room for a little feature like that.

25 THE CHAIRMAN: Would you like to mark where you would expect

The Fingerprint Inquiry | Scotland

1 to find it, had it been there? For the record, this is
2 the uppermost of the two pairs of blue arrows that you
3 have marked?

4 A. Yes, sir.

5 THE CHAIRMAN: Where the lake would appear to be on the
6 inked print and not to be on the latent print?

7 A. That's correct.

8 If I count on Q12 from the position where that lake
9 or the blue arrows indicate the lake's position would
10 be, one intervening ridge, I come to a ridge ending
11 which I have labelled 5 on my chart. This is in the
12 form of a slightly broken ridge with the appearance of
13 maybe a little independent hanging off the end. I've
14 marked the end of the ridge ending as being at the end
15 of this short piece broken off the end, the independent
16 part.

17 If I turn back to the forefinger print I count up
18 one intervening ridge and I do come to a little
19 independent-type ridge which I've marked with number 5
20 but the rest of the ridge is missing. So the ridge
21 which ends at that point doesn't appear on the
22 forefinger print. So this is a very clear difference in
23 the two prints.

24 MR MOYNIHAN: When you say that which the upper green line
25 coming down from the top is your point number 5, in

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1 fact --

2 A. That's right.

3 Q. When you say on Marriott Ross that something is missing,

4 can you tell me, please, what it is that you say is

5 missing?

6 A. A ridge.

7 Q. Why should I not understand the ridge to be -- sorry, is

8 my blue arrow now that I have added at the top the point

9 you are indicating?

10 A. What I've done is I've gone one intervening ridge up

11 from the position of the lake on the forefinger and come

12 across a short independent or incipient ridge. You have

13 drawn your blue arrow to a point on the ridge above that

14 which appears to carry on round without stopping.

15 Q. If I choose red then, what we are pointing to in fact is

16 the small incipient ridge that I just pointed to by the

17 red?

18 A. Yes.

19 Q. You are indicated that that would seem to be on Marion

20 Ross a small incipient ridge?

21 A. Yes.

22 Q. Whereas in Q12 you would say there is a ridge present?

23 A. I would.

24 Q. Why can't one say there is a ridge there by connecting

25 up the edges of the incipients?

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1 A. Because the incipients are narrow ridges. They are not
2 fully formed ridges. They have a different appearance
3 to a fully developed ridge.

4 On Q12, the ridge appears to be the same thickness,
5 within limits, as the ridges either side. It doesn't
6 appear as an incipient, it appears as a fully formed
7 ridge.

8 Q. It would be suitable to save that particular image.

9 MISS BAHRAMI: That's FI2909.22.

10 A. Can I also point out that on Q12, either -- the ridges
11 above and below this ridge ending we can see are
12 separated as if to make room for the additional ridge.

13 On the forefinger the ridges above and below that little
14 incipient are completely parallel; they are not
15 separating at all to make room for an extra ridge.

16 MR MOYNIHAN: In Q12 what you are saying is either side of
17 what you say is a ridge ending there are diverging
18 ridges to accommodate it?

19 A. Yes.

20 Q. Whereas in Marion Ross, in the same area, the ridges
21 remain parallel consistent with there only being
22 incipient ridges in the gaps?

23 A. That's how it appears to me.

24 MR MOYNIHAN: Sir, I don't know at what point you were
25 seeking to adjourn?

The Fingerprint Inquiry | Scotland

1 THE CHAIRMAN: I thought since we ran on to 1.10 having
2 sat --

3 MR MOYNIHAN: In that case --

4 THE CHAIRMAN: We have missed the refreshment side of things
5 anyhow.

6 MR MOYNIHAN: In that case what I will do is carry on .

7 THE CHAIRMAN: Just let me check.

8 MR MOYNIHAN: What I was going to do, Mr Grigg, without
9 losing any of the markings that there are already on the
10 image, you will see the covered 5, 6, 7 and 8. Again,
11 in whatever order suits you best, if you carry on with
12 your analysis of Q12.

13 A. Thank you. I would like to look at the other side of
14 the mark so if I double click this image of Q12 --

15 Q. If you click on the left you get back to the original
16 image.

17 A. As I stressed at the beginning, there is another area of
18 friction ridges which is reasonably well-defined on the
19 lower left-hand side below the core and I started off --
20 and I'll enlarge that area to make it a bit clearer --
21 there's a bifurcation or a feature I take to be a
22 bifurcation below the core and to the left. To the
23 right of it, slightly higher, there's the appearance of
24 a ridge ending --

25 Q. For the record, the bifurcation you are talking about is

The Fingerprint Inquiry | Scotland

1 your number 1?

2 A. I've labelled it number 1, yes.

3 The ridge to the immediate right has the appearance

4 of being a ridge ending but we are entering an area

5 immediately where the ridges lose definition. So this

6 may not be the case. It may just be a red herring. But

7 this bifurcation which appears quite strongly is below

8 the core and to the left. I counted six intervening

9 ridges to the top of the core. I will perhaps draw a

10 line where I would have counted 1, 2, 3, 4, 5, 6 ridges

11 I make that.

12 Q. What we actually found with Mr Wertheim is that if you

13 just mark a line crossing the yellow lines perpendicular

14 to where you are seeing the ridges, that actually helps

15 you to count and enables us to see what you are

16 counting. If you mark with a yellow cross-section where

17 you see the ridges as crossing over the yellow line.

18 A. Is that line sufficient for you? Is the line as I have

19 drawn it --

20 Q. The yellow line is fine but what I was saying to you was

21 you are counting ridges and if I show you, for example,

22 I assume that you are counting this **(indicated)** as one

23 ridge so we could have a point there, then if you mark

24 the other ridges you see we can both count them and see

25 them.

The Fingerprint Inquiry | Scotland

1 A. I'm with you. One there ... and then we can hit the
2 ridge which is the recurve at the top of the core. If I
3 turn to the forefinger, I've marked the bifurcation as
4 point 1. If I draw the lines on the top of the core
5 again, in actual fact I only make that four intervening
6 ridges. I'd made it five earlier. I must have
7 miscounted. But there is a difference in the number of
8 ridges between that bifurcation and the core on both
9 prints. So although the bifurcation is in a similar
10 position there are actually a different number of
11 intervening ridges between it and the core.

12 Q. Can I ask you this: if I use a different colour because
13 you have put in the points in yellow, if one is counting
14 the numbers, why not add in what I am marking in red. I
15 haven't done the counting to see whether it makes any
16 difference.

17 A. It will certainly make a difference but the most
18 right-hand ridge you have indicated with the red line is
19 actually the ridge that goes around the top of the core.
20 That's where I'm stopping the count. I haven't marked
21 it on Q12 either. The other two red lines you have
22 drawn indicate incipient ridges which fall across the
23 line of count. Because incipient ridges are smaller
24 ridges which don't always appear, they are never used
25 for counting unless they appear in exactly the same way

The Fingerprint Inquiry | Scotland

1 in both impressions because they may not appear in one
2 and may appear in the other which would confuse the
3 issue. Therefore, I didn't count them on the
4 forefinger. In fact, I cannot see any on the left-hand
5 one.

6 Q. If you omit the top-most red line then the number of
7 lines drawn would be equal on both sides?

8 A. It would be -- if those incipient ridges were to carry
9 round as full ridges on both of them they would be
10 counted.

11 Q. What is wrong in relation to the bottom-most right line
12 in inserting it?

13 A. On which impression?

14 Q. In Marion Ross, the bottom-most red line, what is wrong
15 with inserting it in the line count?

16 A. Because it is an incipient ridge. It is a thin ridge.
17 It is a broken ridge and it doesn't extend round the
18 pattern. The first line, yellow line, on Q12 we can see
19 is a normal thickness ridge which will, though broken by
20 the background of the development and so on, actually
21 continues round.

22 Q. Can we save that and then again, I will let you carry on
23 with your description.

24 THE CHAIRMAN: I wonder should we take ten minutes now and
25 sit again at 3.25.

1 MISS BAHRAMI: FI2909.23.

2 **(3.12 pm)**

3 **(A short break)**

4 **(3.25 pm)**

5 MR MOYNIHAN: If you allow me, I've just two things to ask:

6 one is about notes and the other is just to get a piece
7 of information for Mr Holmes if I could lay my hands on
8 it.

9 **(To Mr Holmes)** I will come back to it later.

10 Miss Jones, who is for SPSA, did want to ask one
11 question but had to leave. It is outwith the run of the
12 general questions.

13 I had asked you about note-taking and what she was
14 wanting to know was obviously note-taking assists
15 someone in giving evidence, ultimately, in the case.

16 Do you think that proper note-taking assists
17 fingerprint examiners in arriving at the correct initial
18 conclusion on a mark?

19 A. I think note-taking helps the examiner to clarify in
20 their own mind exactly what it is they are looking for
21 by weighing up the observed information and then writing
22 down what they believe are the correct facts about the
23 mark, it clarifies in their own mind what they are
24 looking for and firms up that information and helps them
25 make their comparison.

The Fingerprint Inquiry | Scotland

1 Q. So you actually think it does assist them in the
2 reasoning process itself?

3 A. I do. I believe it's part of the process.

4 Q. What I want to do then is enable you to complete your
5 analysis of mark Q12. Before we do so, I will also
6 start a discipline that when we look at a zoomed image
7 we'll insert the numbers for the points so it's a lot
8 easier to follow, not when you are giving your evidence,
9 it is just when we are looking at copies later on.

10 So if we move on then from the point that you had,
11 which I think was your point -- have we covered your
12 point 3?

13 A. No, point number 1, I believe.

14 Q. I would now like to proceed. On the image that is on
15 screen, what I will do is mark number 1 and am I just at
16 point number 2?

17 A. I believe that's point number 3. Let me just check.

18 Q. It is. Does that mean that I am now at point number 2?

19 A. That's correct.

20 Q. And point number 4?

21 A. 4.

22 Q. With at the top -- and we have completed the discussion
23 but I will mark it in anyway -- point number 5?

24 A. Yes.

25 Q. Sorry to have interrupted you. In that case having

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1 dealt with your point number 1, please then just proceed
2 in the way you see fit.

3 A. On Q12 over to the left of the print I observed there
4 was a ridge ending upwards which I've labelled as number
5 2. This feature lies, if I draw a line, 1, 2, 3 -- and
6 I will come back to that in a moment -- 4, 5, 6, 7
7 ridges to the left of point number 1.

8 On the forefinger, there is the appearance of a
9 ridge ending in roughly the same position relative to
10 point number 1 but I say "roughly" because when I look
11 at the impression, I'm not clear if this ridge doesn't
12 actually continue onwards and either finish somewhere in
13 the area which I'm indicating with the cursor now
14 **(indicated)** over the next few millimetres or actually
15 join up as a bifurcation at that point -- sorry, I will
16 indicate that with an arrow **(indicated)** -- at the point
17 I have just indicated with a red arrow a bit further up
18 on the ridge.

19 However, on the forefinger impression the ridge
20 appears to stop at this point. It wouldn't be normal to
21 leave a large gap between two ridges with nothing in it
22 as it appears on the control print of Marion Ross. So I
23 think this is an aberration in the recording of the
24 print. It should actually continue higher but
25 nevertheless I have marked it where it appears to be.

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1 If I count from number 1, across to that point it is
2 quite easy to see there are eight intervening ridges
3 from 1 to 2; whereas on Q12 there are only seven.

4 However, I've maybe cheating a bit on Q12 because we
5 can see the feature which I've labelled 3 is out of
6 position, it's higher up on Q12 and, consequently, the
7 line from point 1 to point 2 cuts across two ridges
8 formed by a bifurcation which I've labelled as 3.

9 That would make the ridge count the same on both of
10 the prints. However, on the forefinger that bifurcation
11 occurs lower down and doesn't come in the way of the
12 ridge count. I've, therefore, only counted that as 1 to
13 try to show that difference in position without that
14 bifurcation occurring in the middle. So again these are
15 superficial similarities which are in fact not in the
16 right position relative to each other.

17 Q. If you will forgive me, I think that point that you have
18 just made will become more apparent if I insert the
19 numbers 1, 3 and 2 and, in effect, what you are saying
20 is if you draw a straight line from 1 to 2, then the
21 feature number 3 in Marion Ross's print is below the
22 line; whereas in Q12 it is above the line?

23 A. Yes.

24 Q. Could it be that relative differences in pressure could
25 relocate feature 3 to that extent or not?

The Fingerprint Inquiry | Scotland

1 A. It's possible for features to move in relation to each
2 other because the skin is flexible. However, if you
3 have a movement, it should be consistent across the
4 fingerprint so all the features are being moved in the
5 same direction by the pressure of the finger being put
6 down. Therefore, if number 3 is lower than 1, on one
7 you would expect number 2 to be lower as well; whereas,
8 as I tried to explain at the start, what I've marked as
9 2 on the forefinger of Marion Ross may not actually be
10 the characteristic. It may be much higher up rather
11 than lower and it should be a bifurcation rather than
12 the ridge ending which appears on Q12.

13 THE CHAIRMAN: Just while I remember, when one is looking at
14 what I call the inked print, where the inked print is
15 taken from someone who is deceased, as Marion Ross was
16 at the time hers was taken, do you have to make any
17 allowance for that because surely the circumstances in
18 which it is taken are not as easy, to say the least of
19 it, as they would be if the person was putting their
20 finger on a desk or some hard surface to have the inked
21 print taken?

22 A. That's certainly true. I don't think that any
23 particular allowance need be made, though. The manner
24 of taking the prints does differ from a live person to a
25 deceased person, but the clarity of this particular

1 impression of Marion Ross's fingerprint is very good.
2 It doesn't indicate any distortion that might account
3 for a feature being moved out of position and there's no
4 reason for it to be with the normal methods used to
5 record fingerprints from deceased persons.

6 If the body had been in any way decomposed then it
7 may of course be a different matter but this appears to
8 be a body in good condition.

9 MR MOYNIHAN: What we will do, Mr Grigg, is save this image
10 and then we will deal with the last point on Q12 which
11 is number 4.

12 MISS BAHRAMI: That's FI2909.24.

13 MR MOYNIHAN: So the last point, Mr Grigg, we are going to
14 deal with is point number 4. What I will do is just
15 complete the numbering on Q12 itself. I hope I have not
16 actually obscured the point but if I have, just tell me.

17 A. I think we can still see it.

18 Q. What I will do is take that away because I have no
19 intention of obscuring the point.

20 Could you explain, please, your point number 4?

21 A. If we go back to point number 2 and look upwards on Q12
22 and to the left, one intervening ridge we have a
23 bifurcation which I have numbered 4. I was looking for
24 a feature of a similar type in a similar position in the
25 forefinger of Marion Ross and moving up from the

1 apparent ridge ending I have to go across two
2 intervening ridges and up a considerable way before I
3 come to a bifurcation which I've labelled 4 on the inked
4 print. There's a considerable difference in the
5 distance between these two points. There's a difference
6 in the count from the ridge ending number 2 as I have
7 marked it and the position of the bifurcation.

8 So, again, they are similar types of features in
9 roughly the right position but it is roughly the right
10 position. They are not the same.

11 When I was talking about number 2, I pointed out, in
12 fact, that may not be a ridge ending on the inked print
13 at that point, it may in fact be a bifurcation higher
14 up. If that was the case, then the ridge count from
15 number 2 to number 4 would be one intervening ridge on
16 both of them but the features are different and number 2
17 has then moved further out of position in relation to
18 point number 3.

19 What I tried to find was similarities in that area
20 but all I found actually were differences.

21 Q. Could we save that image.

22 MISS BAHRAMI: That's FI2909.25.

23 MR MOYNIHAN: What we have actually done, Mr Grigg, is gone
24 round all of your points of difference. I have silently
25 to myself picked up some of the SCRO points because they

1 coincide with points of difference. Obviously your
2 conclusion is that Q12 is not the fingerprint of Marion
3 Ross.

4 A. No.

5 Q. Is there anything else that's significant in that
6 conclusion that you have not already covered by picking
7 up the points of difference on your charting?

8 A. If you want me to refer to the SCRO chart --

9 Q. No, I do not need you to pick up all the other points in
10 their charting unless there is something particularly
11 significant in your opinion for me?

12 A. No, the differences I have indicated on my own chart
13 leave me in no doubt. I am quite satisfied these two
14 marks were not made by the same person.

15 MR MOYNIHAN: Sir, that would be an appropriate point to end
16 my examination.

17 THE CHAIRMAN: Just before I invite applications to
18 cross-examine I want to make it clear that my view is in
19 this part of the Inquiry it is really not desirable we
20 should go through every point or that counsel should
21 feel obliged to go through every point. All I am
22 interested in is any new issue that has not been covered
23 by Counsel to the Inquiry because I feel that it is
24 better for those who don't agree, the experts who don't
25 agree, to make their own positive contribution as to why

1 they say their view is correct and the other one is
2 wrong rather than counsel feeling they have to go
3 through it with each witness.

4 Subject to that now is there any application, first
5 of all, from you, Mr Smith?

6 MR SMITH: There is. I may say I am relieved at the
7 observations that we are not expected to go through the
8 detail in that way. There are a number of matters I
9 would wish to ask questions on. I can say I hope to be
10 concluded in about 15 minutes if I am allowed to ask
11 these. The first relates to the question of training,
12 this witness' own experience in training and indeed what
13 training is provided to SPSA, if it continues to this
14 day. The second is to ask a very few questions about a
15 presentation that Mr Mackenzie who is due to give
16 evidence provided, not in great detail, one or two very
17 small points of detail to set up a couple of
18 cross-examination questions.

19 Finally, I do wish to ask about Y7. There are a
20 couple of very small points that have not been covered
21 by Mr Moynihan that I can deal with fairly quickly.

22 THE CHAIRMAN: I think I should have said before, I think
23 cross-examination has been responsibly conducted before
24 and I am content, as long as you make sure that we are
25 not covering something that is already touched on.

1 MR SMITH: I am happy to do that.

2 THE CHAIRMAN: Yes, thank you.

3 **Cross-examined by MR SMITH**

4 Q. Mr Grigg, I wonder if I can ask you, fist of all, to
5 confirm that you have been involved in, if I put it in
6 this way, the fingerprint business for many years as is
7 disclosed in your Inquiry statement?

8 A. Yes, I started working as a Scenes of Crime Officer in
9 1973 and I qualified as a fingerprint expert in 1985.

10 Q. I think you explain in your statement to the Inquiry you
11 have attended a number of courses: two courses at Hendon
12 Police College, you say a six week standard course in
13 1982 and a three-week advanced course before you
14 qualified as a fingerprint expert in 1986. Is that
15 correct?

16 A. Yes, you are right it was 1986 not 1985. I beg your
17 pardon.

18 Q. I am simply reading from your statement, Mr Grigg.
19 You then explained that at some stage you became a
20 fingerprint training instructor with the National
21 Training Centre in Durham?

22 A. That was 1997.

23 Q. Can I just be clear about it, as far as your training
24 and experience is concerned no doubt there was a good
25 deal of on the job training but the training you

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1 obtained seems to have come from, as it were, sources
2 outside where you ultimately ended up. Is that fair, ie
3 Hendon?

4 A. Yes, that was the standard training package available to
5 police forces the England at that time.

6 Q. Prior to giving evidence in England, what kind of
7 certification or certificate did you require before you
8 actually felt capable and confident enough to give
9 evidence in cases before the courts?

10 A. I was authorised to present evidence to courts after I
11 had passed the advanced fingerprint course and received
12 the authorisation of my Chief Constable at the time.

13 Q. So it was actually almost an examination kind of
14 situation? Is that right? You had to pass the test --

15 A. On the advanced fingerprint course, yes, there is an
16 assessment. There are assessments for
17 practical ability, theoretical knowledge and, in fact,
18 presentation skills.

19 Q. Did you have any particular further examinations to pass
20 before you became an instructor?

21 A. I had to pass a practical examination before being
22 offered the job as an instructor.

23 Q. Can I ask you to move towards the microphone a little or
24 move the microphone towards you.

25 A. As part of the interview process I had to pass a

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1 practical examination before I was offered the position
2 as an instructor at National Training Centre.

3 Q. I think we've seen some information which indicates that
4 SCRO had, at some stage earlier on, I think, indeed
5 round about the time of the trial of Shirley McKie and
6 prior to that, they had been attending Durham on
7 occasions in respect of further training courses,
8 et cetera, et cetera.

9 Is that something you had personal knowledge of in
10 about 1999/2000, that period of time?

11 A. Yes, I believe officers from Scotland have attended our
12 training courses throughout that period.

13 Q. Was that an occasional thing or a regular thing?

14 A. The training provided or offered to the Scottish forces
15 has changed over the years. I don't believe a few years
16 ago that the Scottish forces took advantage of the whole
17 training programme offered by National Training Centre.

18 We now have a national training programme within the
19 United Kingdom which the SPSA attends in its entirety
20 and supports.

21 Q. How quickly after the Shirley McKie case was it that
22 what is now the SPSA engaged fully with Durham to take
23 up the available courses that are provided there?

24 A. I'm afraid I couldn't answer that question accurately.

25 Q. Obviously, the SCRO has changed, at least in name. I

The Fingerprint Inquiry | Scotland

1 think the Scottish Fingerprint Service was the name that
2 was used and then SPSA and exactly what the change in
3 personnel and training structures are concerned is yet
4 to be, I think, discussed before this Inquiry, but as
5 far as that organisation is concerned, can you give some
6 indication of the general standard that you feel they
7 operate to at the present time? Do they produce people
8 of high quality, of average quality? Where would you
9 fit it into the overall picture?

10 A. I would say the officers from Scotland are of very high
11 quality. I think they always have been and they are
12 well trained and well versed in the job.

13 Q. I would like to ask you about the question of
14 note-keeping. You were asked some questions about that.
15 I think you indicated that that is something that would
16 be appropriate for the purposes of a court case. If you
17 felt you were going, possibly going to court.

18 I would like to ask you just about the detail of
19 notes. If I was cross-examining you and I was to say to
20 you, "Did you have any doubt about the match between the
21 inked print and the mark", would you be able to identify
22 that from your notes?

23 A. I'm not sure I actually wrote the conclusion down in my
24 notes. Can I check them now to tell you?

25 Q. I am not really too concerned about this particular

The Fingerprint Inquiry | Scotland

1 matter, I am really concerned about what level of detail
2 you would, generally speaking, have in your notes.
3 Would you note down where a bifurcation was? Would you
4 draw little sketches? Would you make notes about the
5 timing and who else looked at it? What kinds of things
6 can we imagine?

7 A. My notes are actually in two parts. I have written
8 notes which do contain details of time spent on
9 particular aspects of the examination and I also have
10 graphical notes where I have used acetate overlays to
11 record the position of features which I have then
12 described in written form as well in my notes.

13 Q. So I take it then, if I was in a criminal case
14 cross-examining you, you would be able to provide
15 significant information about what you did, what you
16 found and would you be able to indicate, as it were, an
17 audit trail to say who else had seen the fingerprints as
18 far as you know? Would you be able to provide that
19 information?

20 A. In a fingerprint bureau, yes, that information would be
21 kept. It would be part of the recording of the process.

22 Q. Yes, something you would expect to be good practice if
23 not something you feel should be invariable practice
24 throughout England and Wales at least; is that fair?

25 A. Well, I believe it is part of the practice to have an

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1 audit trail in the Fingerprint Bureau. The Scottish
2 forces, to my understanding, have an ISO 9000 approval,
3 which means they will have processes in place to record
4 such things.

5 Q. Let us suppose you did examine a mark and you felt there
6 was some doubt, I take it that is something you would
7 disclose, even if you concluded ultimately that you
8 thought there was a match between the two, you would
9 nonetheless disclose in your report that you weren't
10 entirely comfortable with it. Is that fair?

11 A. In principle, yes, but I cannot imagine giving evidence
12 of identity on a mark I wasn't sure about.

13 Q. The exercise you were asked to carry out in this matter
14 I take it was a fairly unusual one, was it?

15 A. It was not something I have had to do before in this
16 fashion.

17 Q. Is it fair to say that what you were doing was looking
18 at two fingerprints, ie if you take Y7 and Shirley
19 McKie's fingerprint, having concluded they were not the
20 same and then try and explain either why they were not
21 the same or look for similarities you would then try and
22 knock down; is that fair?

23 A. I have to admit I found the whole process very
24 confusing. It was not in accordance with the way in
25 which I would normally work in comparing fingerprints.

The Fingerprint Inquiry | Scotland

1 The way I was asked to carry out the comparison under
2 phase 1 and phase 2 was not a way in which I would
3 normally carry out a comparison. It was very difficult.
4 I found it very difficult to keep my own mind clear
5 about what I was doing without being influenced by the
6 other information that I was observing from other
7 people. And while there is, between the principal
8 contradicters, a common consensus about the outcomes of
9 the marks there are differences in the way we've carried
10 it out. Whereas there is a difference in outcome
11 between the contradicters and SCRO there was a lot of
12 similarity about the way we've carried it out. It has
13 been a very difficult process to conduct equably.

14 Q. Yes, but you have identified, in your opinion, a number
15 of differences that exist between Y7 and Shirley McKie's
16 mark. I take it that I would be right in saying that a
17 single difference would be enough for you to say, no,
18 these are not the same, if it could not be explained by
19 double tap rotation, something of that kind; is that
20 fair?

21 A. A clear difference would be very difficult to explain.
22 However, when you reach a certain volume of
23 similarities, then you would form an opinion about
24 identity and would look for an explanation for an
25 apparent difference. Where there are several

The Fingerprint Inquiry | Scotland

1 differences to be accommodated it becomes much more
2 problematical.

3 Q. I would like you to look at one document, please. It is
4 numbered CO0059, page 12 and 13 if we can have these
5 page next to each other, please.

6 Mr Grigg, I am sure that you will not have seen this
7 before. Am I correct in that assumption?

8 A. I don't believe I've seen them before. No, they don't
9 look familiar.

10 Q. If you take it from me just to, as it were, some
11 orientation purposes that this was a presentation we
12 understand was presented by Mr Mackenzie to a meeting at
13 the Tulliallan Police College in Scotland some time ago.
14 I would like to ask you for your comments just on one or
15 two points.

16 First of all, we see on the left-hand image there
17 appear to be numbers up to 45 on the left-hand side?

18 A. Yes.

19 Q. In what you will recognise as being Y7. We don't see
20 numbers up to 45 on the right-hand side. I am not quite
21 sure in my mind what the reason for that is but I am
22 sure we will find out, perhaps tomorrow. What is
23 represented, as I understand it, or was represented is
24 that there were up to 45 points of similarity between Y7
25 and Shirley McKie's print.

1 Can I just ask you, first of all, is that something
2 that would surprise you if someone was able to find
3 45 points in sequence and agreement between Y7 and
4 Shirley McKie's print?

5 A. I would certainly be surprised. I don't believe they
6 are there. I don't believe there are any points in
7 agreement so to find 45 it would surprise me.

8 Q. Can I ask you to look at the general shape of Y7. I am
9 sure you are fairly familiar with it. Imagine if I was
10 to draw a line and round the perimeter of the mark, bear
11 that exercise in mind, wherever you would draw it, I am
12 not going to do it. If you can look towards the bottom
13 do you see in the left-hand image, point number 7, do
14 you see it bears to point to a black blob of some kind?
15 Do you see where point 7 is?

16 A. Yes.

17 Q. Are you able to say whether the end point of that line
18 from 7 ends up on the ridge markings in Y7? Can you see
19 if it actually points to anything on the fingerprint?

20 A. On Y7, I don't think it points to the fingerprint at
21 all. It appears to point to the background of the
22 doorframe that mark has been deposited on.

23 Q. Similarly, number 8, do you see the line goes up, it
24 passes the end point of Y7. Does that appear to be on
25 the very edge, the very margin of what you do if you

The Fingerprint Inquiry | Scotland

1 drew a line on it. Do you see that?

2 A. Yes, I can but I think I would like to point out that
3 asking me to make a comparison of a mark which I have
4 not seen before in this medium is not ...

5 Q. Very well. I will save it for Mr Mackenzie in due
6 course.

7 Finally, if I can ask you something. Perhaps with
8 reference to the photograph that you have in front of
9 you, Mr Kent's photograph, I think I looked at that
10 earlier on while you were sitting in the witness box
11 during the break. What I am interested in -- and you
12 can just use that image that is on the left-hand side of
13 the page just now -- we can see, as it were, this step
14 if we go from Y7, at the very top of it, towards the
15 right, the position maybe about -- just above the
16 sticker 27, towards the top of the image. Then it comes
17 down generally towards about 4.00/5.00 and then it takes
18 a kick to the right and then comes round and down the
19 bottom.

20 I think you indicated that that may be something to
21 do with the contour of the wood. Would you agree with
22 me that the Terry Kent image actually gives a fairly
23 good indication of what may be a wood grain or something
24 similar going up following the line that I've just
25 described, the straight part of the line going up

1 towards the top of the page. Is that fair?

2 A. Yes, that is how I interpreted Y7 as well.

3 Q. Let us imagine that far from there being a raised grain

4 along that line that there's actually a dip along that

5 line. Are you able to help whether if there was a dip,

6 as it were, a gouge in the wood -- I don't mean in any

7 dramatic sense but it's actually a depression in the

8 grain -- could that account for the actual lines of the

9 fingerprint not, as it were, entering the valley to

10 leave any mark?

11 A. Yes, that is the interpretation I put on it. We can see

12 a darker line here (**indicated**) and I'm indicating the

13 left-hand edge of the mark Y7 at the top where there is

14 a slight raising of the grain in a fine line causing a

15 bit more pressure as the ridges touch it. To the right

16 of that we have a white area where there is I take it to

17 be a depression in the surface which the ridges haven't

18 touched. So the raised part of the grain has put an

19 edge on the impression that has been left.

20 Q. I'm sorry, there is one more question I wanted to ask

21 and it is this: I think you expressed some considerable

22 doubt as to whether or not this could be, I think it was

23 put, a multiple tap, at least double. I think you

24 excluded it could be two touches for the reasons you

25 gave earlier.

1 If I was to suggest that it may only be consistent
2 with someone's opinion in this case that there were at
3 least four different touches of that print, at least
4 four different touches, I take it your position is that
5 that is really just impossible to fathom in the
6 circumstances. Is that fair?

7 A. Where there is a double touch, there's a multiple
8 impression, it is normal to find a fault line where the
9 two impressions overlap each other. I have seen double
10 touches where the fault line is hard to detect. I
11 certainly can't detect anything I would ascribe to a
12 fault line on this particular image. To have four
13 separate areas without a distinguishable fault line
14 between them I think is extremely unlikely on this
15 print.

16 MR SMITH: That's very measured of you. Thank you very
17 much.

18 THE CHAIRMAN: I had better ask Miss Grahame, first of all,
19 have you any ...?

20 MISS GRAHAME: No, thank you.

21 THE CHAIRMAN: Mr Holmes?

22 MR HOLMES: Yes, sir, there are some issues I would like to
23 cover with Mr Grigg. I would like to cover the issue
24 that has just been mentioned, that is whether Y7 is a
25 single or a multiple touch. I would like to cover the

1 points made or the statement that he has made to the
2 Inquiry so far as it deals with his previous examination
3 of Y7 carried out by himself and Mr Sheppard at Durham.
4 I would like to briefly cover his analysis of Y7 and Q12
5 for the Inquiry, though bearing in mind that individual
6 points are something that should not be covered again
7 with --

8 THE CHAIRMAN: If they are fresh points, certainly, that you
9 want to touch on.

10 MR HOLMES: Briefly also, sir, I would like to cover the
11 conclusion contained in the document CO0032 which was
12 authored by the witness.

13 **Cross-examined by MR HOLMES**

14 Q. Thank you, sir.

15 Mr Grigg, first I would like to cover some of the
16 issues that were raised in the statement you gave to the
17 Inquiry. You say that you were aware of the McKie case
18 before July 2000 because, you say, of media coverage and
19 of informal discussions with other experts.

20 Are you able to say what were the nature of the
21 discussions you had had with other experts about the
22 McKie case prior to July 2000?

23 A. Well, I can't remember any details as such but I know
24 that my reaction was complete surprise that SCRO would
25 be accused of making a mistake of this nature and that

1 was the same attitude that my colleagues had at the
2 time, as I recall. They were all utterly shocked that
3 this allegation could be made. We trusted SCRO. We
4 thought they did not make mistakes.

5 Q. Can I ask then did the individuals with whom you
6 discussed the case express a view on Y7?

7 A. Before the original examination I made along with the
8 Mr Sheppard and Mr Thompson none of us had actually seen
9 the marks so it was a purely gut reaction that SCRO
10 wouldn't get these comparisons wrong.

11 Q. So did you discuss Y7 with anyone who actually had
12 access to any material prior to conducting your own
13 examination?

14 A. Only with Mr Sheppard and Mr Thompson after we conducted
15 our own examinations.

16 Q. You say also in your statement that you cannot recall
17 having seen Y7 yourself before July 2000 but that you
18 may have done so.

19 If you had, where would you have seen it?

20 A. I believe it was published on the Internet. Whether
21 that was before the examinations I carried out at NTC or
22 afterwards I can't really say. As far as I know no
23 copies of the mark were circulated around the
24 Fingerprint Service so unless I saw it on the Internet
25 because I believe it was published there or marks

The Fingerprint Inquiry | Scotland

1 alleging to be part of the original inquiry were

2 published there, I'm not sure I would have seen it.

3 Q. Would you have been aware at the time of any views being
4 expressed by those who had circulated the material?

5 A. I can't recall specifically but I believe that the views
6 of Pat Wertheim had been published, who I believe had
7 quite strong views about the comparison.

8 Q. Indeed, the Chairman asked you earlier on today whether
9 you were aware at the time that you carried at your
10 examination that Mr Wertheim had formed a view and you
11 said that you were. Is that correct?

12 A. I knew he carried out an examination on behalf of the
13 defence, yes.

14 Q. Did you know that he considered Y7 not to have been made
15 by Shirley McKie?

16 A. Yes, I knew of his conclusion.

17 Q. You say in your statement that you were instructed by
18 Mr Sheppard to carry out the examination in 2000. Is
19 that correct?

20 A. Yes.

21 Q. Amongst the materials that you were given was the report
22 that had been authored by Mr Wertheim.

23 Did you see the report prior to carrying out your
24 examination of the mark?

25 A. No, I didn't look at it until after I carried out the

1 comparison.

2 Q. Did Mr Sheppard give you any indication of why you were
3 looking at Y7 in July 2000?

4 A. Only that there was an Inquiry being carried out and NTC
5 had been approached to review the marks independently.

6 Q. Did Mr Sheppard give you any indication of any views
7 that had been expressed about the mark previously?

8 A. I don't recall discussing the outcomes of any
9 comparisons with Mr Sheppard or Mr Thompson until after
10 we'd carried out our comparisons when we discussed our
11 findings.

12 Q. Was it apparent to you from the circumstances under
13 which you were being instructed that the mark was being
14 challenged?

15 A. Yes.

16 Q. You go on in your statement to explain the process that
17 you undertook when you went to examine the mark. First
18 you said that you examined the chance impression without
19 reference to the inked impression; is that correct?

20 A. That would be the process we would carry out, yes.

21 Q. How long would you spend doing that alone before you
22 even looked at the inked impression?

23 A. I cannot recall at this point in time. I did make notes
24 at the time but, as I explained earlier, I don't know
25 where those notes are. They would almost certainly give

1 the answer to that question. I can recall being fairly
2 surprised at the differences I found fairly early on.
3 It didn't take very long for me to become very cautious
4 about the examination because of the differences I was
5 picking up during it.

6 Q. When you say that you found differences early on, what I
7 am asking you about, first of all, is your assessment of
8 the chance impression of Y7 alone without any reference
9 to the known mark.

10 How long would that ordinarily take?

11 A. I can only surmise it took me a similar length of time
12 to the current examination which I've got a record of.
13 I could give you the time I spent on it this time round
14 but I really don't know the details of the examinations
15 I carried out nine years ago.

16 Q. When you look at an average chance impression, are we
17 talking about a matter of seconds to look at the crime
18 scene mark? Are we talking about a matter of minutes or
19 are we talking about spending longer than that on it?

20 A. In this particular case, I would expect the initial
21 assessment to take, as you say, a matter of minutes.
22 Some marks can be assessed very, very quickly given
23 sufficient clarity and sufficient volume of information.
24 Others will take much longer. For the purposes of this
25 Inquiry I certainly took longer than I would have done

The Fingerprint Inquiry | Scotland

1 perhaps if this had been a routine job withing a bureau.

2 But I'm assuming nine years ago it was several hours to

3 carry out the examination.

4 Q. Can I ask when you say you would have taken some time

5 over the examination carried out for this Inquiry, what

6 materials were you given to examine for the purposes of

7 this Inquiry?

8 A. In 2009?

9 Q. Yes.

10 A. I received -- and I have a note of them -- I received an

11 example comparison chart; I received blank chart

12 templates; I received 8 times enlargements of Y7; and

13 fingerprint forms in the name of Shirley Cardwell;

14 fingerprint forms in the name of Marion Ross; actual

15 size photographs of Y7 and Q12; enlargements of Q12; I

16 also received ... enlargements of certain fingerprints

17 on the forms in the name of Shirley Cardwell and Marion

18 Ross; I received a fingerprint labelled XF; and

19 fingerprints in the name of David Asbury.

20 Q. What I was getting at is that you had access to the

21 original sized photographs?

22 A. Yes.

23 Q. That is what you used to carry out the comparison, is

24 it?

25 A. And the enlargements that I was supplied with as well.

The Fingerprint Inquiry | Scotland

1 Q. On the subject of enlargements, you reviewed charted
2 enlargements that were prepared by SCRO when you did
3 your examination in 2000; is that correct?

4 A. Yes.

5 Q. And it's fair to say that you were critical of the
6 enlargements that had been prepared?

7 A. I certainly was.

8 Q. One of the criticisms that you had was that there
9 appeared to be lines drawn towards characteristics which
10 didn't, in fact, point anything out; is that right?

11 A. That's correct.

12 Q. Are you aware of the fact that the charted enlargements
13 prepared for this case were prepared on a charting PC?

14 A. I was aware of that. I was certainly told that because
15 I remember discussing it afterwards with Mr Sheppard and
16 Mr Thompson.

17 Q. Is this a piece of equipment of which you have any
18 experience?

19 A. No, I've not used one but I've heard about them. We
20 have a facility or we should have a facility on our AFIS
21 system to do charting but nobody ever uses it, if it is
22 actually operational.

23 Q. When you say you have heard about them, have you heard
24 good things about them?

25 A. No.

The Fingerprint Inquiry | Scotland

1 Q. What seems to be the particular difficulty with a
2 charting PC.

3 A. The difficulty was actually putting the line where you
4 wanted it to go.

5 Q. Could that explain the difficulties that you found with
6 the SCRO enlargements that you were presented with back
7 in 2000?

8 A. Not entirely. Some of the lines appeared to point to
9 areas where there were no features in the vicinity.

10 Q. Are those features you cover in your examination in the
11 2009 Inquiry?

12 A. I can't remember the specific characteristics involved
13 nine years ago.

14 Q. You concluded that the charted enlargements that were
15 prepared at the time were copies of one another and that
16 they had not been produced independently.

17 Were you aware of the system of preparing
18 enlargements that was in place at SCRO at the time?

19 A. Do you mean the corroboration of evidence?

20 Q. Yes.

21 A. I was aware that evidence in Scotland is given by two
22 fingerprint experts, yes.

23 Q. So when you say that the charted enlargements that you
24 were provided with were not introduced independently
25 that is not necessarily to say the examination that led

The Fingerprint Inquiry | Scotland

1 to those enlargements was not carried out independently?

2 A. No, but my memory, as I recall the events, we had
3 enlargement charts signed by different people which
4 purported to show the same features either differently
5 or different features the same, in other words mistakes
6 were being made apparently across the charts in
7 different people's names.

8 Q. I will move on for now. You say that when you carried
9 out your examination in 2000 you took a reasonable
10 amount of time over it. You were aware of the
11 seriousness of the work and, in any case, you believe
12 that a fingerprint expert's work should be carried out
13 with the utmost care.

14 Again, can we assume that you took a similar amount
15 of time over the examination that you carried out for
16 the 2009 Inquiry?

17 A. I've tried to be careful at all times, yes.

18 Q. The conclusion that you come to is based on one premise,
19 is it not, which is that the mark Y7 came about as the
20 result of a single touch. Is that correct?

21 A. I believe Y7 to be one impression, yes.

22 Q. Are many of the differences that you have marked in the
23 2009 enlargement capable of explanation if one accepts
24 the premise that mark Y7 came about as the result of a
25 multiple touch or that there is at least significant

1 distortion within the mark?

2 A. It's certainly possible with significant distortions for
3 features to be moved or their appearance to be changed,
4 but there would normally be indications where this had
5 taken place, what we call a red flag. If you're
6 referring to the possibility of double touch on Y7, I
7 cannot see any signs there is a double impression on
8 that particular mark.

9 Q. You have made reference to red flags. You have also
10 referred previously in your evidence to the Inquiry to a
11 gentleman by the name of David Ashbaugh.

12 Is he somebody who has done any particular amount of
13 work in this area?

14 A. Yes, David Ashbaugh published a book in 1999
15 Quantitative-qualitative Friction Ridge Analysis, which
16 is probably the most recent textbook available on
17 fingerprint examination. He expounds the scientific
18 principles on which fingerprint comparison should be
19 based, the ACE-V methodology, for example. He discusses
20 some of the psychological aspects because it is a mental
21 process and is affected by mental or the influences that
22 we may be subjected to, which is why it is very
23 important that all the analysis is done on the unknown
24 mark in order not to be influenced by what we can see
25 more clearly on the known mark and why the comparison

1 should be carried out independently without any
2 influence from other people.

3 Q. I am thinking particularly of the term that you have
4 just used, which is "red flags", and the assessment of
5 the mark to see whether there is a continuous ridge flow
6 or whether the mark is a complex one.

7 Is that something Mr Ashbaugh has done any
8 particular work on?

9 A. I'm not aware of particular work by David Ashbaugh but I
10 know he uses the term "red flags" in his work.

11 Q. Would it surprise you to learn that Mr Ashbaugh
12 submitted a report in 2000 which indicated that Y7 was
13 the result of a double, if not a triple, tap?

14 A. I hadn't heard that.

15 Q. Can I take it from the phrase that he uses, a double or
16 a triple tap, that is what you would understand to be a
17 double or a triple touch?

18 A. Yes.

19 Q. Would you therefore disagree with Mr Ashbaugh?

20 A. Well, I don't agree that there is more than one
21 impression.

22 Q. Can we take it that where there are individuals in this
23 case who are of the view that this is as the result of
24 more than one touch that you would simply regard their
25 view as incorrect?

The Fingerprint Inquiry | Scotland

1 A. If the suggestion was made there was more than one
2 touch, I would want to see why that decision had been
3 reached and how the impression has been made without
4 leaving any clear signs as it happened. I cannot see
5 them.

6 Q. Can I show you an image of Y7. I think Mr Kent's image,
7 you have agreed, is quite clear which is TS0006. It is
8 page 2 of that and if we can rotate it so the mark is
9 facing up the way.

10 First of all, the area of that mark that you
11 describe as the "core", could you indicate where that is
12 on Mr Kent's image, please?

13 A. How would you want me to do that? With a circle round
14 it or just an arrow?

15 Q. Whichever way you prefer.

16 A. I will put an arrow. I am drawing a red arrow pointing
17 towards the centre of the pattern the fingerprint comes
18 from.

19 Q. Roughly how many ridges would you say are visible above
20 the core towards the top of the fingertip on that
21 impression?

22 A. I've counted 11 up to the point here, the ridge ending.
23 There look to be at least as many above it. I have not
24 counted above it all the way to the top along that line.

25 Q. Is it common to see that many ridges visible above the

The Fingerprint Inquiry | Scotland

1 core of a chance impression?

2 A. Certainly on a thumb, yes. A thumb has a great number
3 of ridges above the core area. The thumb is a taller
4 finger than the other fingers and there are a large
5 number of the ridges up to the nail. If the finger is
6 rolled upwards, you can have a considerable number of
7 ridges.

8 Q. Are you able to give any indication on looking at that
9 impression and judging by the number of ridges that are
10 visible above the core of how the mark was deposited?

11 A. Yes, I think I mentioned earlier that I think it was
12 deposited with a slight rolling motion; so there's been
13 a bit more pressure at the top as the finger has been
14 put down and the finger has been pushed slightly, which
15 has closed up the ridges in the middle area.

16 Q. I think you have answered the question already of how
17 you account for the shape of the mark. I am interested
18 particularly in the area which seems to bulge out to the
19 right towards the bottom of the mark.

20 A. I will just draw a red line. Do you mean this bulge
21 here?

22 Q. Yes. Is an alternative explanation for the one that you
23 have given not that that is another impression caused by
24 the same thumb but facing in a different direction from
25 the one that you see facing towards the top of the

1 screen there.

2 A. It's certainly a possible explanation and something I
3 considered when I first saw the mark. Normally, a
4 single mark would have a smooth outline with no steps in
5 the outline. When I saw this bulge on the right-hand
6 side, that was something I immediately thought of. On
7 closer examination, I could see nothing to indicate
8 there are two separate impressions and when I noticed
9 that the top part lined up with the grain of the wood, I
10 was quite satisfied that the shape was caused by the
11 surface rather than separate touches on the surface.

12 Q. There seems to be a considerable variation in the colour
13 or the shade of the mark. There seems to be a very much
14 darker area towards the centre and a much darker area
15 round the periphery of the mark. Would you agree with
16 that?

17 A. There are different densities of colour of blackness
18 across the impression, yes.

19 Q. How would you account for that?

20 A. Partly as a function of the pressure that's been applied
21 affecting the thickness of the ridges and therefore the
22 apparent density of the mark, partly as a result of
23 background contamination which is showing through the
24 ridges, and, as I said earlier, it may be due to the way
25 in which the sweat was deposited unevenly across the

The Fingerprint Inquiry | Scotland

1 surface of the mark or dirt on the surface or on the
2 finger that attracting the development medium to make a
3 darker area.

4 Q. Is there some distortion in this mark as a result of a
5 variation in pressure that was applied?

6 A. Yes. Every mark is distorted by the very act of putting
7 it down. This one has been distorted compared with the
8 plain thumb impression on the fingerprint form, but that
9 is quite normal with a mark made by chance in this
10 fashion.

11 Q. How does that affect your approach when you come to do
12 your analysis?

13 A. Well, the first stage is to examine the unknown mark,
14 and in this case Q7(sic), to clarify in my own mind what
15 the information is that I will be able to rely on before
16 I look at the fingerprint form mark.

17 It's taking into account not just the fingerprint
18 but the background on which it is deposited. Ideally, I
19 would have liked more information about the actual
20 position of this mark so I could better envisage the
21 position of the person who made it. That would give me
22 more information about the way in which the finger would
23 have been put down. I didn't have that. I had to make
24 some assumptions but one tries to get as much
25 understanding as one can before you do the comparison.

The Fingerprint Inquiry | Scotland

1 Q. When you come to carry out your examination, however,
2 are you keeping in your mind the fact that there could
3 be some movement of characteristics because of a
4 variation in pressure or because of distortion due to
5 pressure?

6 A. Oh, yes. It is quite normal to find subtle movements
7 and discrepancies in appearance between the same
8 characteristics on different fingerprints.

9 Q. Is that something that could explain any of the
10 differences that you have marked on your own enlargement
11 of Y7?

12 A. I don't believe that the volume of discrepancies can be
13 explained by movement.

14 Q. Are there individual discrepancies that could be
15 explained by movement?

16 A. It is possible that the appearance of a
17 characteristic might vary on one impression to the other
18 because of the way it has been deposited or the way it's
19 been developed or even recorded.

20 Q. Are you able to identify those discrepancies which, in
21 your view, are not capable of explanation purely because
22 of movement?

23 THE CHAIRMAN: Mr Holmes, in the course of his evidence, I
24 understood the witness to say that there were places
25 where you would expect other characteristics to move as

The Fingerprint Inquiry | Scotland

1 well because they were so close, as I understood your
2 evidence.

3 A. Yes, particularly in Q12.

4 THE CHAIRMAN: So you really have expressed your view about
5 the movement of characteristics. If one moves, you
6 expect the other to move which is reasonably adjacent to
7 it.

8 A. I would expect adjacent characteristics to be affected
9 in the same way and any displacement to be progressively
10 similar across the print.

11 MR HOLMES: Is that something that could take place as a
12 result of any other form of distortion that took place
13 when the mark was deposited? Sorry, that is not a very
14 good question.

15 Can characteristics move individually as a result of
16 movement of the finger when the mark was deposited as
17 opposed to a variation in pressure when the mark was
18 deposited?

19 A. Not any significant degree. The deposition of a mark
20 can change in the pattern if the mark is distorted by
21 the pressure or slight movement but that, again, will be
22 affected -- not just individual characteristics but
23 characteristics across the print will be affected to
24 some degree by that movement or pressure.

25 Q. When you carried out your examination of Y7, both in

The Fingerprint Inquiry | Scotland

1 2000 and for the purposes of this Inquiry, you mentioned
2 that you took notes. Is that correct?

3 A. Yes.

4 Q. Was it your practice in 1997 always to take notes when
5 you were carrying out an examination?

6 A. Before 1997, when I worked in a Fingerprint Bureau, I
7 made notes for serious cases and cases where I knew I
8 was going to be asked for evidence. In routine cases, I
9 didn't make full notes although I would annotate
10 photographs of the marks with details of the features I
11 found.

12 Q. Was that the standard practice within your own bureau at
13 the time?

14 A. Yes.

15 Q. Are you aware what the standard practice was within SCRO
16 at the time?

17 A. I'm not. I can't say I was.

18 Q. What is the benefit in experts keeping notes when
19 ultimately a number of experts will have to go and speak
20 to a single illustrative enlargement that may not
21 necessarily reflect the 16 characteristics or the number
22 of characteristics that they discovered during their own
23 examination of the mark?

24 A. I don't believe an expert can speak for anything other
25 than their own opinion about their own examination.

The Fingerprint Inquiry | Scotland

1 Therefore, any notes I made would be for my own use in
2 order to help me recall what I did and explain what I
3 did. I wouldn't expect other people to use my notes.

4 Q. If you were working an assistant who had to go along to
5 court and have reference to an illustrative enlargement,
6 then what you would require to do is take notes when you
7 carry out your own examination of the mark to start with
8 and thereafter take another set of notes when you
9 carried out your examination to check the 16 that had
10 been marked on the enlargement?

11 A. If I was required to produce an enlargement chart in
12 court, as for the Inquiry today, I would want to produce
13 it myself rather than rely on someone else's.

14 THE CHAIRMAN: Are you moving to another subject?

15 MR HOLMES: Yes, sir.

16 THE CHAIRMAN: It does not look to me as if you are going to
17 be able to finish this afternoon. I had hoped that we
18 could release Mr Grigg but obviously that does not look
19 possible. I think it has been a long-ish day for both
20 the witness and for everyone. I am sorry, Mr Grigg, I
21 am sure it is very inconvenient but I think if you would
22 be good enough to come back tomorrow morning we will try
23 not to detain you too long. I apologise again. We
24 would have liked to complete your evidence today.

25 THE WITNESS: I appreciate that.

The Fingerprint Inquiry | Scotland

1 MR MOYNIHAN: We are going to capture the image that is on
2 the screen.

3 MISS BAHRAMI: FI2909.26.

4 THE CHAIRMAN: Thank you. 10.00 tomorrow.

5 **(4.30 pm)**

6 **(Adjourned until 10.00 am the following morning)**

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