Kilty De pis item alights - hu quantito fice analyses

1	this case in May 7, 1981, I believe, and attached to it are
2	some Xerox copies of Spectrographic plates that were pro-
3	vided us. Can you just take a minute and examine each of
4	the plates?
5	A. I have before me the plate you have out,
6	evidently plate listed 78243?
7	Q. Yes.
8	A. What kind of examination do you want me to
9	conduct of this?
10	Q. Well, just I want you to take a brief look at
11	it and tell me whether or not each of these plates from
12	these plates here, whether or not a quantitative analysis
13	could be made of the items that were listed as tested.
14	MR. COLE: In every one of the plates that are
15	shown in the attachments to these Interrogatories?
16	MR. LESAR: Yes.
17	A. Well, if these are reproductions of plates
18	of photographs of plates that were given you, a strict quan-
19	titative analysis could not be done on these plates.
20	Q. Why not?
21	A. Because the standard the standards that
22	were used here were not calibrated standards.
23	Q. How would that be reflected on the plate?
24	What would a plate that is calibrated show that these do not?
25	A. Well, the notes that were accompanying them
26	would show what the concentration of the elements were and
27	would measure you would have densitometer measurements
28	for each of the lines.

1	ı
	2
1	3
	4
	5
	6
	7
	.8
	9
•	10
	11
1	12
	13
	14
	15
	16
	17
	18
•	19
	20
	21
	: 22
	23
	24
	25

26

27

28

		Q.	So,	as	I	unde	erstar	ıd	that	wh	at	you'	re	sayi	ng	is
that	only	the	exar	nine	er	who	took	th	ese	at	the	tin	ne v	would	be	: .
able	to d	eteri	nine	the	<u>.</u> (guan	titat	ive	res	ult	s o	f th	nese	e?		

- A. No, that's not so at all.
- Q. Even he would not be able to?
- A. No, he would not be able to.
- Q. Okay, and what is it that you have to have to enable you to do that?
 - A. For these plates?
 - Q. Yes.
- A. Too late. You cannot do quantitative analysis on these plates strict quantitative analysis.
- Q. Okay. What do you mean by strict quantitative analysis?
- A. You can do semi-quantitative analysis on these plates...
 - Q. Would you distinguish?
- A. That is an intercomparison of one sample with another based on the density of the lines. You can say, for instance, one sample has more antimony in it than another sample. One sample has no bismuth. Another sample has bismuth. A third sample has copper; another sample has three (3) times as much copper. One sample has "X" amount of silver; the other sample has seven (7) "X" amount of silver. It doesn't tell you how much is there but it's a relationship of one sample to another.
- Q. Now, what do you have to do to be able to get numbers to get the quantitative measurements?

A. What you would do is have a standard material, the analysis of which is certified, and you would burn that under the same conditions as you burn the other specimens here and you would measure the density of the various lines produced for certain elements in your elements you're interested in and compare those densities to the densities of lines in your question specimen.

- Q. Allright. Now, would you look at the materials that were provided us in this case -- they should be in this Exhibit 2, I believe it is -- and see whether or not any such quantitative figures were provided in any of the tests made by the F.B.I.?
- A. There is some quantitative figures produced by that, yes, in neutron activation analysis.
- Q. On just the spectrographic we're talking about now. Would you locate this page and see...
- A. Well, that page has nothing to do with activation -- or spectrographic analysis.
 - Q. This is neutron activation?
 - A. Yes.
 - Q. Okay.

MR. COLE: Jim, I think, maybe, since you have asked for him to take a look at a substantial amount of material, we should probably take a break at this time and I'd like to talk with the witness and see if we can come up with the material you're talking about in Exhibit 2.

MR. LESAR: Okay. 1 (A brief recess was taken.) Q. Mr. Kilty, could you look at Exhibit 2 and see if there are any -- start from the first and leaf through it until you come to any quantitative spectrographic results? 5 MR. COLE: I think we'd maybe best clarify the 6 question, Mr. Lesar. Are you saying that he's looking for 7 quantitative results? Does that mean any page that deals -8 with quantitative analysis? MR. LESAR: Yes. that's correct. 10 The closest one -- the closest item would be 11 a -- whatever -- it's 78243 on the bottom. It's got some 12 13 numbers. Allright, could we have that marked "2-A", 14 Q. 15 Now, why do you say that this is the closest thing? 16 Well, it has some numbers on it and there were 17 some standards run but it's not -- it's still a semi-quan-18 titative analysis. 19 Okay. Why couldn't they have made a stricter Q. 20. quantitative analysis? 21 Well, probably was no need for it, simply 22 because in my view, there'd be no need. 23 There was no technical reason that would have 24 prevented them from doing it, given the state of the art at

27

28

25

26

the time?

A. I'm not sure of the quality of the densitometer that they had in 1963 when this was done as to whether or not they could have made a strict quantitative analysis.

1	Q. Could they have done so in 1964?
2	A. I don't know. I wasn't in the laboratory.
3	Q. I thought you were in the laboratory in 1964?
4	A. No.
5	Q. When did you join the laboratory?
6	A. In February of 1965.
7	Q. Okay. Could they have done so in February,
8	1965?
9	A. I don't think so. They were in the process of
10	purchasing a different kind of a densitometer then. I don't
11	think they had it.
12	Q. On the following page, there are some numbers
13	on the lefthand margin. The one at the top says 72 C-Contro
14	and at the bottom
15	MR. COLE: Mr. Lesar, if you're going to refer to
16	this page, can we have this also marked as "2-B" so that
17	we'll be
18	MR. LESAR: Certainly.
19	MR. COLE: Keeping it straight?
20	Q. Now, I note that the last number in the left-
21	hand margin on that page is it says 42 and then dash nine
22	(9) and then it says scrapings from inside windshield "Q15".
23	What does the 42 signify?
24	A. Well, that's the rack number.
25	Q. What does the rack number indicate?
26	A. The place on the plate.
27	Q. And what does the 9 indicate?
28	A. That's the ninth sample from the top.

Q. Now, referring back to the previous page, 2-A, is there -- are there any figures there that pertain to the 2 "'Q15" sample? I don't see a notation that "Q15" is associated 4 with page "2-A". う Q. Allright. Is there any reason why there are 6 not the sort of numbers for "Q15" as there are for any of the other items that were -- for which there are numbers on 8 9 "2-A"? I don't know. 10 Α. Would it have been possible to have done the 11 12 same type of -- obtained the same type of quantitative measurements for "Q15" as for the other samples? 13 14 MR. COLE: I object. I don't think that you have established that there was a type of quantitative analysis 15 done for the others besides "Q15". If you'd like to ask the 16 witness that, maybe that could clarify that point. 17 18 Q. Mr. Kilty, as I understand your testimony, "2-A" -- the figures on "2-A" -- represent a type of quanti-19 tative analysis. 20 21 A. Yes, called semi-quantitative analysis, I would 22 characterize it as. 23 Q. Now, is there any reason why that semi-quanti-24 tative analysis could not have been done for "Q15"? 25 Α. I don't know. 26 Q. Can you think of any reason why it might not have 27 been done? 28

No.

It would be pure speculation which I am

Landner

7/4/51

The modified the enchance pages up to give you when us again shoot — that the INE deficients of the next did not the analytic playlike any quantitudes analytic as the INE options, It was no taket and it but but they have present in this testingly, the adders of the INE to like the way and by electring annually only play decides or not it and to done that is destroyed by the 1/18/64 sums which maps may are duting a quantitude.

Anditor this this tai dinc, mining up danc, follow, banks and 1623at at these a

If you have any quantitions, plants ands.
There he must store that they didn't do that they could and should have.