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BY HAND

January 5, 1981

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FFAC/ Kurth v Lockheed Aircraft Corporation
Our file 2041.1278.2S, 6S

Dear Doctors:

Enclosed for your review is John Edwards' follow-up report regarding incorrect aircraft measurements made by plaintiff's witness Dr. Stanley Morain in his expert report forwarded to you on November 25, 1981.

Very truly yours,

HAIGHT, GARDNER, POOR & HAVENS

By John J. Connors

John J. Connors

/jlw
Enclosures

LOCKHEED-GEORGIA COMPANY
A DIVISION OF LOCKHEED CORPORATION
INTERDEPARTMENTAL COMMUNICATION

TO R. P. Barton DEPT. 85-03 ZONE 35 DATE 14 December 1981

FROM J. W. Edwards DEPT. 72-05 ZONE 240 EXT. 4004

SUBJECT: AIRCRAFT DIMENSION CORRECTIONS MORAIN REPORT - C5 SIAGON CRASH

The subject report makes use of certain aircraft measurements and then using these measurements, together with scaled lengths from photographs arrives at track lengths, depths, etc. Subsequently, these lengths are used in calculating deceleration g'levels.

The aircraft dimensions are incorrect in every case which inevitably leads to erroneous track lengths and g'levels.

Page 5 tire dimension.
The Morain report takes the tire dimension from figure 4 page 7 and incorrectly takes a dimension from the bottom of the fuselage to the ground line as 3.75 feet as being the tire diameter. Actually, the tire diameter is 4.02 normally for a new tire and is expected to grow with use due to stretching. This 4.02 foot dimension is commercially available in tire catalogues.

Page 21 t-tail section.
The Morain report uses the same figure 4, page 7 to arrive at a vertical separation of 34.5 feet.

T.O. 1C-5A-3 page 1-7 shows the W.L. of the fuselage tip as 340 and page 1-10 shows the stabilizer tip as W.L. 772. This difference of 772-340 equals 432 or 36 feet. Since the trim in this flight would have been trailing edge up by approximately ½°, the distance would have been greater than 36 feet.

Actually, a more reliable figure to use, because of the slant angle of the t-tail, would have been the slant distance from the stabilizer tip to the fuselage tip which is 479.03 inches or 39.92 feet. This length is arrived at using the 432 inches vertical separation and the 206.91 inches separation in station line.

Utilizing the best picture available (copy attached), the slant measurement is .24 inches of the stabilizer and the distance from the front end troop compartment to the trending canal of 4.45.

$(4.45 \div .24) \times 39.92 = 740.18$ feet which compares to Morain 565 feet in figure 15.

Actually the most accurate length would be the troop compartment which is 75.67 feet in length. $(4.45 \div .40) \times 75.67$ equals 841.82 feet.

Utilizing this 841.82 feet and ratioing the river to trending canal and trending to front end of the troop compartment gives a distance of 1505.69 feet from the river dike to the trending canal or 2347.51 feet which compares to 1715 feet on the Morain report page 21.

Page 28 troop compartment length.

The Morain report refers to figure 2 and notes that compartment E is 65 feet long. A variety of photos in the plaintiffs posession definitely show extra structure attached to the aft end making it considerably longer than 65 feet. Scaling this many photos, counting frames aft of the 2100 bulkhead, etc., shows the total length to be 75.67 feet, therefore, all calculations used by Morain are off by 16%.

Page 32 width of aft end of troop compartment.

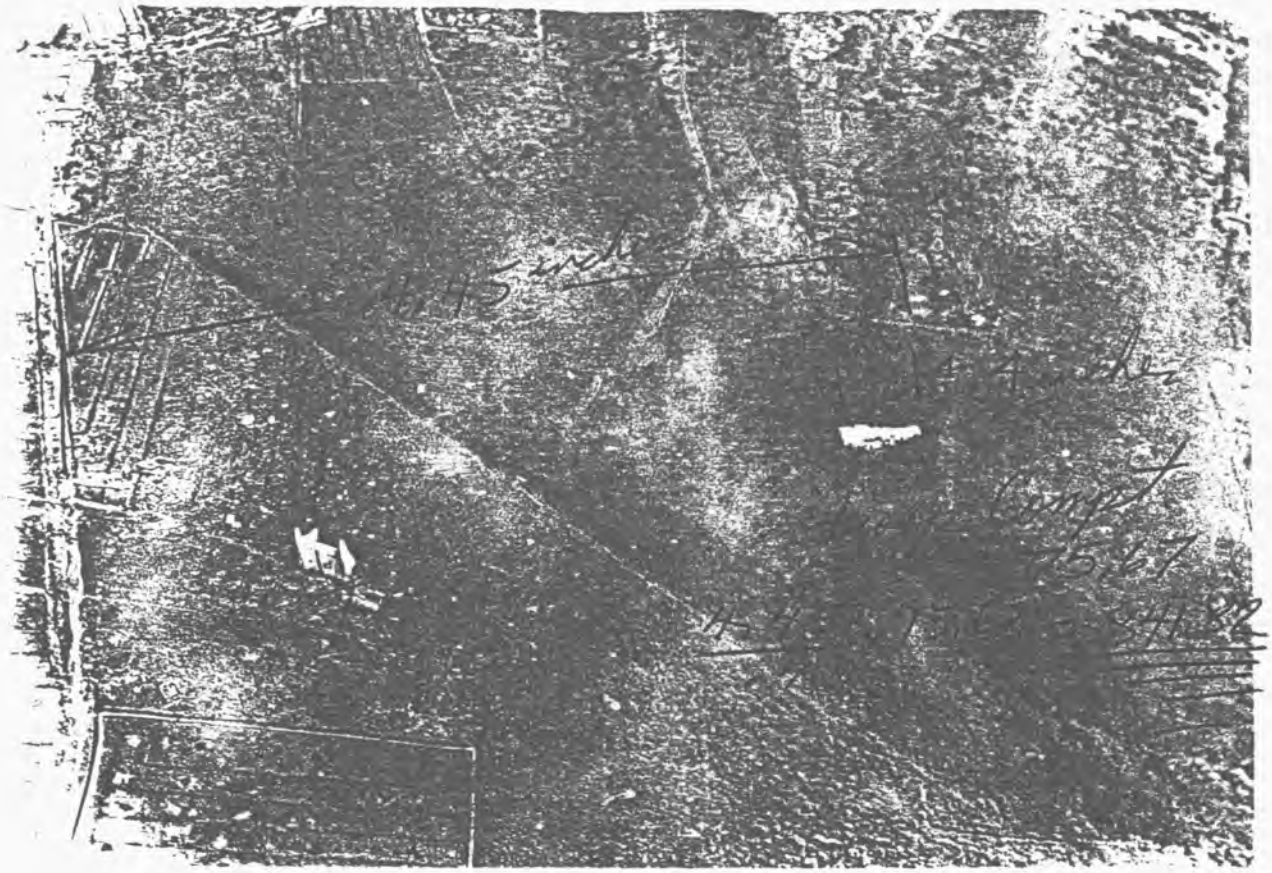
The Morain report again ignores the 10 feet of extra length on the troop compartment and takes the width of 232 inches from compartment E in figure 2. The enlarging shape of the fuselage is shown in many photos and while the contour is compound and difficult to scale the actual width is 254.42 inches.

J. W. Edwards
Chief Project Engineer
Project Engineering Division

JWE:bg

Attachment

cc: Mr. Tom Almy
Haight, Gardner, Poor & Havens



$\frac{2.2}{1.23} \times 84.82 = 1505.69$

$+ 841.82$

TOTAL 2347.51