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| DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW | |
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| 1ST REVIEW - DATE: <u>6/97</u> | DETERMINATION [CIRCLE NUMBER(S)] |
| AUTHORITY: <input type="checkbox"/> AOC <input type="checkbox"/> ABC <input checked="" type="checkbox"/> ADD | ① CLASSIFICATION RETAINED |
| NAME: <u>BILL LAWRENCE</u> | ② CLASSIFICATION CHANGED TO: |
| 2ND REVIEW - DATE: <u>1/21/99</u> | ③ CONTAINS NO DOE CLASSIFIED INFO |
| AUTHORITY: <u>ADD</u> | ④ COORDINATE WITH: |
| NAME: <u>Hal Fleming</u> | ⑤ CLASSIFICATION CANCELLED |
| | ⑥ CLASSIFIED INFO BRACKETED |
| | ⑦ OTHER (SPECIFY): <u>4 PAGES</u> |

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REF. SYM: 3416/131

NNNNQPQA074QAA010

PP RUTQBN RUWMFNA RUEPXG RUWPUJ RUWPQL RUWPQS

DE RUWPQA 195C 0342030

ZNY SSSSS

P 032021Z

FM W F WHITE USAEC ALBUQUERQUE NMEX

TO RUTQBN/16AF TORREJON AB SPAIN ATTN ADVON PASS TO R C MAYDEW /SERIES C/

INFO RUWMFNA/DNS KIRTLAND AFB NMEX/SERIES D/

RUEPXG/LCDR G HEDRICK DMA USAEC WASHDC/SERIES E/

RUWPUJ/LCOL CARL JOHNSON JNACC FC/DASA SANDIAB/SERIES F/

RUWPQL/FRANK DUNN LASL LOS ALAMOS NMEX/SERIES G/

RUWPQS/W BARTON S MOORE SANDIA CORP ALBUQ NMEX/SERIES H/

AEC

BT

SECRET RESDAT RE: ANALZSIS OF ACFT COLLISION NEAR VERA, SPAIN BY SANDIA CORP TEAMS (MESSAGE 5). REF: SRD MSG, 1 FEB 0900 ZEBRA CITE C-00108, FORWR BARTON, SANDIA CORP, 9320.

TO: R C MAYDEW, SANDIA CORP. FROO W R BARTON AND W N. CAUDLE. THIS MESSAGE IN FIVE PARTS.

PART I: OUR ASSUMPTIONS, BASED ON YOUR MSG OF 1 FEB.

(3) SLAG PILES ARE MORE THAN 20 YEARS OLD.

(4) ANY SAND NOT ON THE BEACH IS DRY. (5) CALICHE IS LIGHTLY CEMENTED, LIKE MESA SOIL IN ALBUQUERQUE. (6) LOAM MEANS AN

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NO. 1 OF 2 COPIES. SERIES 11

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REC'D 9320
MAR 15 1966

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PAGE TWO RUWPQA 195C S E C R E T RESDAT

IRRIGATED AND PLOWED FIELD. PART II:

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CRATER ON SLAG OR TAILING PILE SHOULD BE DARKER THAN SURFACE OF PILE, AND YOU SHOULD SEE THROWOUT RAYS OF DARKER MATERIAL. THERE PROBABLY WILL BE NO READILY VISIBLE CRATER LIP.

DOE
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CRATER SLOPES WILL BE VERY FLAT, LESS THAN 20 DEGREES AND WILL PROBABLY HAVE NO READILY VISIBLE CRATER LIP OR THROWOUT RAYS. CRATER ON SANDY BEACH WILL SURELY BE DISTORTED AND LIKELY DESTROYED BY TIDES.

DOE
b(3)

FALLBACK AND THROWOUT IN AND AROUND CRATER SHOULD BE CHUNKY. YOU MAY BE ABLE TO SEE THROWAT RAYS AND PERHAPS RADIATING CRACKS CLOSE TO CRATER.

DOE b(3)

SLOPES WILL BE ABOUT 20 TO 30 DEGREES.

IF LOAM IS MOIST, CRATER WILL BE SMALLER AND THE SLOPES STEEPER

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PAGE THREE RUWPQA 195C S E C R E T RESDAT
THAN THESE VALUES. IF LAND HAS BEEN PLOWED AND IRRIGATED FORMX MANY
YEARS, YOU SHOULD HAVE HARD LAYER AT 2 TO 3 FEET. THIS LAYER COULD
FORM A FLAT BOTTOM FOR A CRATER IN LOAM. THE SMALL NOSE-ON CRATER IN
LOAM COULD BE DESTROYED OR FILLED IN BY CARELESS DEFOLIATION OF CROPS.
PART III: SOIL PENETRATION UNLESS UNIT HIT MUCK, IT WILL NOT BE
DEEPER THAN 20 FEET FOR NOSE-ON IMPACT OR 5 FEET FOR LENGTHWISE.
IMPACT FOR THE AFORE-MENTIONED FOUR SOILS. IF UNIT HIT BEACH SAND
AREA, IT WILL NOT BE DEEPER THAN 13 FEET FOR NOSE-ON OR 5 FEET IF
LENGTHWISE,
BUT CRATER PROBABLY WASTED IN. IF UNIT HIT ON OCEAN SIDE OF BEACH,
UNIT COULD HAVE PENETRATED 30 TO 40 FEET. IF UNIT BROKE AT IMPACT,
PENETRATIONS OF PIECES WILL BE LESS THAN THOSE DEPTHS JUST GIVEN AND
PROBABLY WILL BE SUBSTANTIALLY LESS. CANNOT MAKE CLOSER ESTIMATES
WITHOUT BETTER PHYSICAL DESCRIPTION OF SOILS. IF BETTER
PENETRATION ESTIMATE REQUIRED, YOU SHOULD OBTAIN SERVICES OF LOCAL
SOIL ENGINEER AND HAVE HIM FURNISH DATA AS TO BLOW COUNT (STANDARD
PENETRATION TEST), COMPRESSIVE STRENGTH, AND UNIFIED CLASSIFICATION.
PART IV: SOME RANDOM QUESTIONS AND THOUGHTS FROM MC NEILL. COULD~~XXXXXXXX~~
UNIT HAVE GONE DOWN MINESHAFT QUERY ARE THERE CAVES, SINKHOLES,
OR UNDERGROUND CAVERNS IN THE AREA QUERY HAS DETAILED STEREO
AIR PHOTO COVERAGE BEEN MADE QUERY

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PAGE FOUR RUWPQA 195C S E C R E T RESDAT

NEW SUBJECT: ACCORDING TO OUR RECORDS ON 17 TESTS COMPLETED IN THE DEVELOPMENT PROGRAM OF THIS WEAPON FROM FEBRUARY 1961 TO JUNE 1962, THE AVERAGE CDS WAS 2538 SQ. FEET. WEIGHTING THE TEST RESULTS, A 2400 SQ. FT. CDS WAS USED IN DETERMING THE FINAL BALLISTIC DISPERSION NUMBERS ON THIS WEAPON. THIS WAS ISSUED IN A LETTER TO EGLIN IN SEPT 1962. A REPORT (SC-DR-64-1266) PUBLISHED IN OCT 1964 ALSO INCLUDES THIS INFO. WE WOULD LIKE TO KNOW WHAT THE CDS OF 1600 WAS BASED ON. OUR ESTIMATES SHOW THAT 1600 IS A GOOD NUMBER FOR A 64-FOOT RIBBON CHUTE.

TRAJECTORY STUDIES USING INFO THAT WAS TRANSMITTED EARLIER DO NOT CONFIRM NEW COLLISION POINT. A CDS OF 13.8 SQ. FT. WAS USED FOR THE TUMBLING WEAPON. WE ARE STILL USING A GROUND TRACK OF 256 DEG.; WITH YOUR LATEST INFO, WHAT IS YOUR OPINION OF THE PILOT'S QUOTED 237 DEG. GROUND TRACK QUERY WE ARE MAKING NEW TRAJECTORY STUDIES VARYING VEHICLE PARAMETERS TO TRY AND MATCH YOUR NEW COLLISION POINT WITH UNITS 1, 2, AND 3 IMPACT POINTS. WE HOPE TO GET ADDITIONAL INFO ON TRAJECTORY RESULTS AND INFO CONCERNING STRUCTURAL FAILURE OF TAIL ASSEMBLY TO YOU LATER TODAY.

[REDACTED] DOE b(3)

PART V: EXAMINATION OF TWO RESERVOIRS RETURNED TO LASL FOR SERIAL NUMBER VERIFICATION DEFINITELY ESTABLISHES THAT THEY ARE FROM WEAPONS NO. 2 AND NO. 3. END REF WDS:PHS (S-149) GP-1

BT

DISTRIBUTION:

~~1/2H~~ R. C. MAYDEW, 9320, ATTN: W. BARTON, 9324
~~2/2H~~ S. A. MOORE, 1540

This is an exact copy: 06/03/97: 7447: cmg.
Distribution:
M0659A Elva Barfield, FOIA Officer/OPA; DOE/AL

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