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LA REPORT-282A

June 22, 1945

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This document contains 3 pages

100-TON TEST:

RADIATION ABOVE THE CRATER AFTER 41 DAYS

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100-TON TEST:
RADIATION ABOVE THE CRATER AFTER 41 DAYS

The radiation above the crater was surveyed for the second time on June 17, 41 days after the shot. The survey was made using the Lauritsen-Landsverk electroscopie in the same manner as was used in the survey on May 7, reported in LA-282*. The purpose of this survey was to ascertain the permanence of the active deposit exclusive of the effect of the radioactive decay. Accordingly, the radiation from the same 10-ml sample of the original solution was measured with the same instrument as was used in the survey. On June 20, the number of mR/hr at 1 meter was 49.3. On May 7, the same solution gave 110 mR/hr at 1 meter. The radiation data taken on June 17 were multiplied by the decay factor 2.1 in order to compare them with those taken on May 7 exclusive of the effect of the radioactive decay. The radiation data corrected in this way are plotted in the figure. The smooth curves were drawn to fit the points in a reasonable way. The points plotted are those which were obtained along the north and west radii on each of the two dates.

Integration under the two smooth curves shows that on the later date there was 63 percent less active material up to 150', and 66 percent less up to 400'. Presumably, most of this loss was due to the effect of the wind in dispersing the active material outside the region in which there was measurable activity. Some part of the loss is due to the covering of new inactive dirt over the active layer.

The shielding action of this new dirt reduces the radiation from the surface somewhat.

- * ERRATA, LA-282, p. 5, line 6: 8×10^8 should read 8×10^7 ;
 - p. 6: The table at the top of the page should read:
- | | |
|-----------|------------------------|
| 0" to 1" | 1.4×10^{10} |
| 1" to 2" | $.82 \times 10^{-10}$ |
| 3" to 4" | $.16 \times 10^{-10}$ |
| 5" to 6" | $.03 \times 10^{-10}$ |
| 8" to 12" | $.004 \times 10^{-10}$ |

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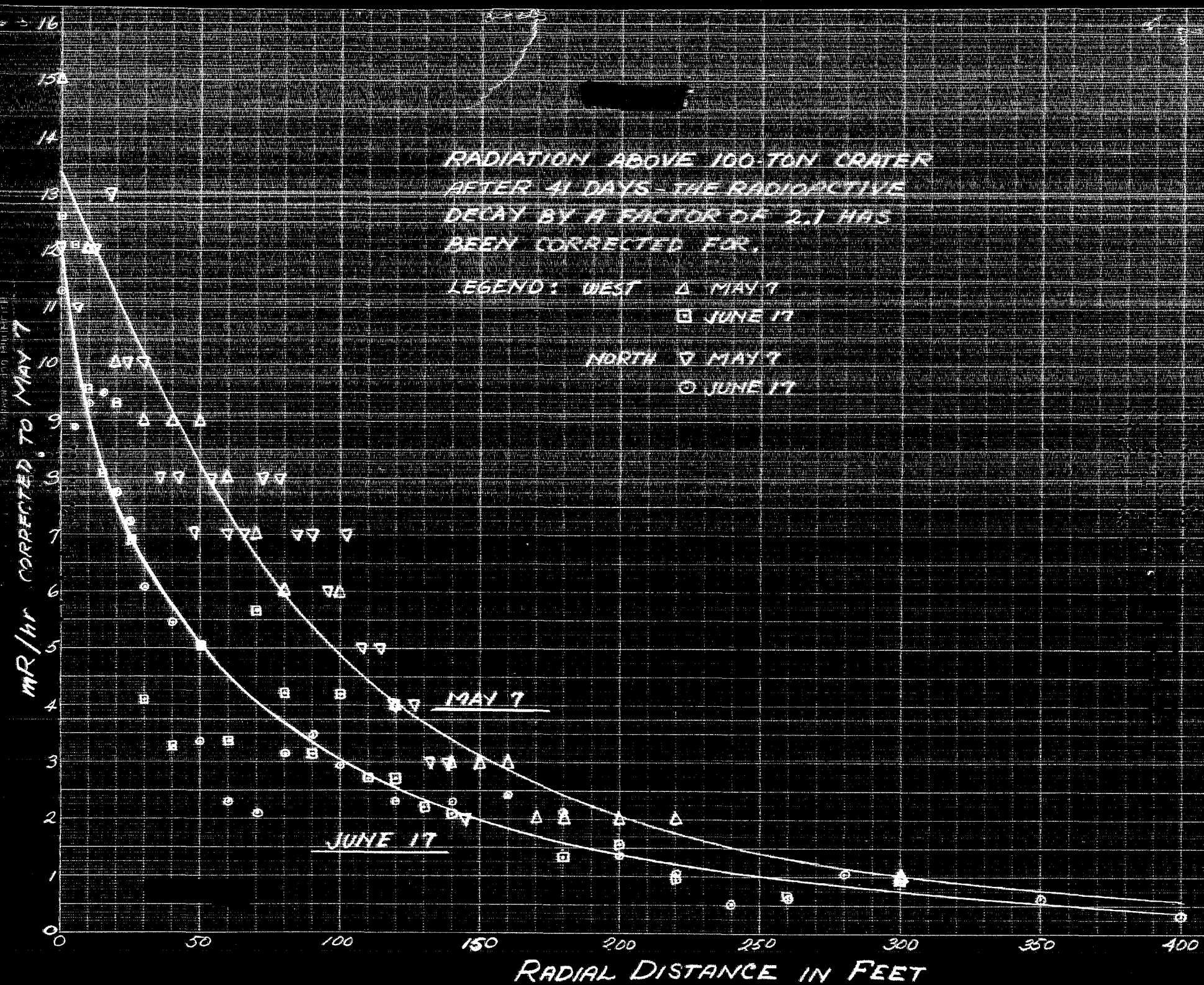
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