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MEMORANDUM FOR: CJTF SEVEN

10 March 1954

SUBJECT: Report on Soil and Water Sampling Mission

410414

1. In compliance with your oral instructions, the undersigned visited Wot Erikub, Maloelap, Wotho, Majuro Atolls in the Marshall Islands 5 through 7 Marc 1954 for the purpose of obtaining earth and drinking water samples, and of meas ing gamma ray dose rates, and also checked the radiological condition of the S. ROQUE on its arrival at Majuro 7 March 1954.

2. The first four atolls were visited by Marshallese interpreter Takushi and the writer by means of an UF-1 amphibious aircraft. Majuro was reached by C-47. Erikub might have been omitted since it was not inhabited, being propert of the Wotje tribe which goes there only occasionally to gather copra. (This w unknown until after the visit.)

3. At each atoll, only the principal inhabited island was visited. At ea visited island an effort was made to compose a representative soil average by collecting into a single container several samples, each approximately one squa foot of area and one inch depth. Water samples were collected from the princip sources currently in use. The gamma dose rates are averages for the inhabited areas.

4. With regard to certain minor discrepancies between the survey methods by Major R. D. Crea and the writer; it was originally planned to perform the su jointly, and when it became advisable to separate and survey different atolls, time remained for discussion of details of techniques.

5. Gamma-ray dose rates on Wotje and on Erikub are each the average of MX and AN/PDR-39 average readings which agreed reasonably well. The MX-5 was rend inoperative when the rubber life raft was swamped by surf on the first attempt launch from the beach at Erikub. Following the Wotho survey, the PDR-39 develo a temperature-dependent reading of 0.4 - 2 mr/hr, so that later readings in thi range are of very dubious reliability.

6. The following tabulation summarizes the atoll survey. S is Soil, W is Water Sample:

ATOLL	ISLAND	DATE	TIME	SAMPLE NO	MR/HR & SAMPLING
WOTJE	ORMED	5 Mar	1600	S5	3.5 mr/hr, 1-beach, 3-mid-vi age, 1-back village.
				W6	½ well plus ½ catch basin.
ERIKUB	ERIKUB	5 Mar	1715	S6	1.5 mr/hr. 1-mid-village, on path to beach. No inhab ants, no water supply found.

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ATOLL	ISLAND	DATE	TIME	SAMPLE NO	MR/HR & SAMPLING
MALOELAP	KAVEN	6 Mar	1130	S7	1.8 mr/hr, 2-village, 2-path to beach.
				W12	Well water.
				W13	From catch basin.
WOTHO	WOTHO	6 Mar	1615	S8	0.8 mr/hr, 1 by well; 2-mid-village.
				W9	Well water (no rain in catch basin for 2 mo.)
MAJURO	ULIGA	7 Mar	1200	S9	0.5 mr/hr, 4 from near Admin Bldg.
				W10	Tap water.

7. Pacific Micronesian Line S.S. "ROQUE", Master: Lawrence Blanc, home port Guam, left Eboye 0840 M on 1 March, entered channel to Utirik Lagoon about 1200 M on 2 March, and anchored in Lagoon at 1524 M on 2 March; docked at Majuro (Uliga Is.) 1630M on 7 March. Readings (mr/hr) after docking: 2-3 inside main deck structure, 10 on open deck, 5-8 in sleeping quarters on upper deck, 10-30 on rope and canvas. Prior radiation levels cannot be estimated because of rain squalls and uncertainty about when decks last washed. Master was advised to have decks washed down as soon as convenient. He was told that the activity would not hurt anyone, but that it was undesirable to have it around longer than necessary.

8. RECOMMENDATIONS: Future visits to Erikub and Maloelap should not be attempted by UF-1 except under conditions of greater urgency. The writer's prior experience in such operations is very limited, but from his own observations plus the remarks made by those better qualified to judge, it appears that a fair amount of risk is involved.

9. Especially notable was the very cooperative attitude of the Navy personnel at Kwajalein and the Marshall District Administrative Officials at Majuro in supporting this mission.

/s/ T. N. White
DR. T. N. WHITE
Health Division
LASL

1 Incl:
Marshall Islands Atoll
Samples collected by T. N.
White, 5-7 March 1954

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MARSHALL ISLANDS ATOLL SAMPLES COLLECTED BY T. N. WHITE, 5-7 MARCH 1954

Earth samples were collected as follows:

At each island visited several samples were dug and put into the same one-gallon "ice-cream carton". Each sample (i.e. each digging) approximated one square foot to a depth of one inch. The number and locations of the samples were selected to represent, as well as could be judged, an average of the areas used by the inhabitants, after the samples were mixed in the carton. Areas that were unusually shaded or unshaded by trees were avoided. The large "pebbles" in the composite represent coral gravel from "main street" through the village.

Water samples were selected according to the principal source in current us

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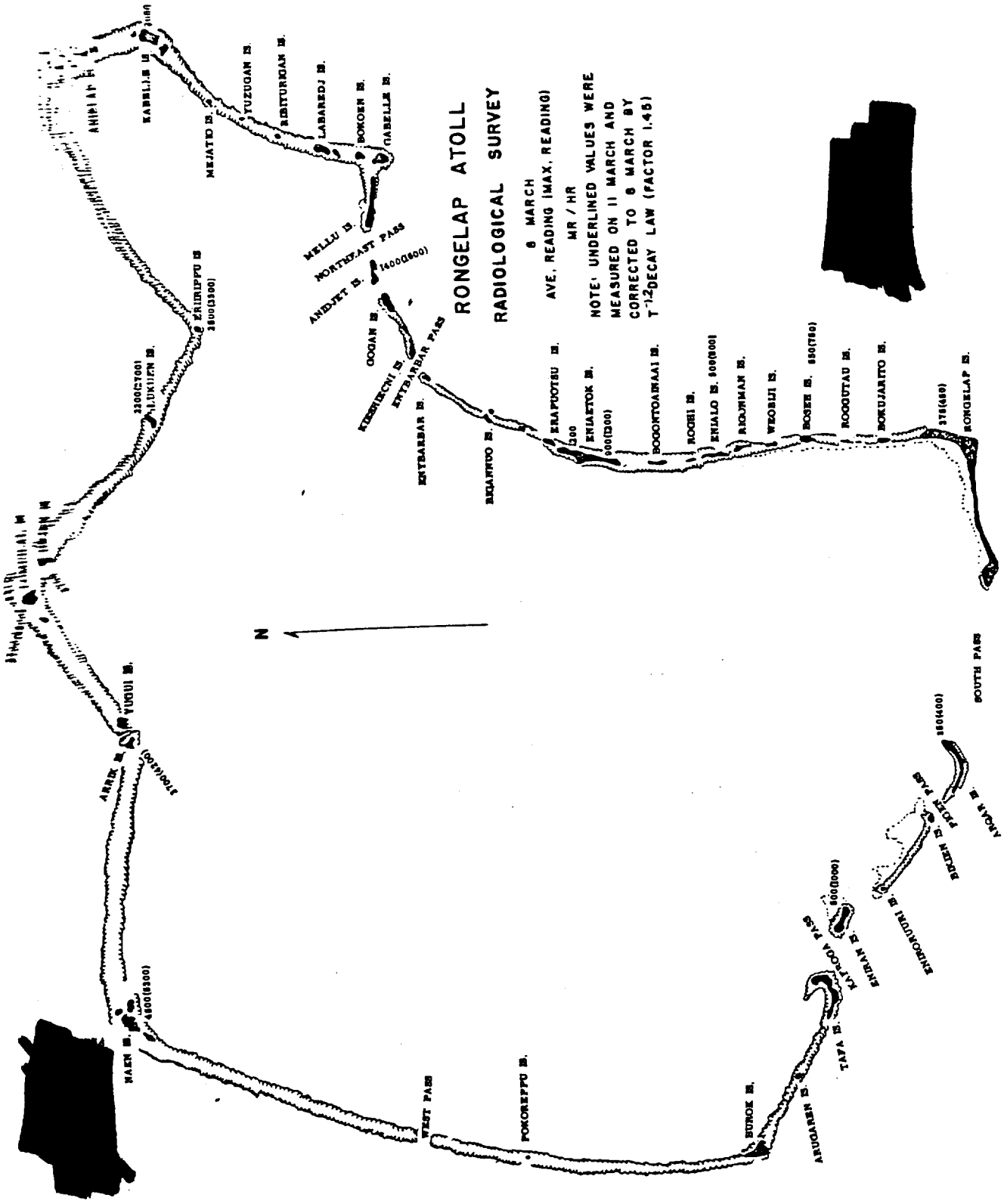

FIG. 1

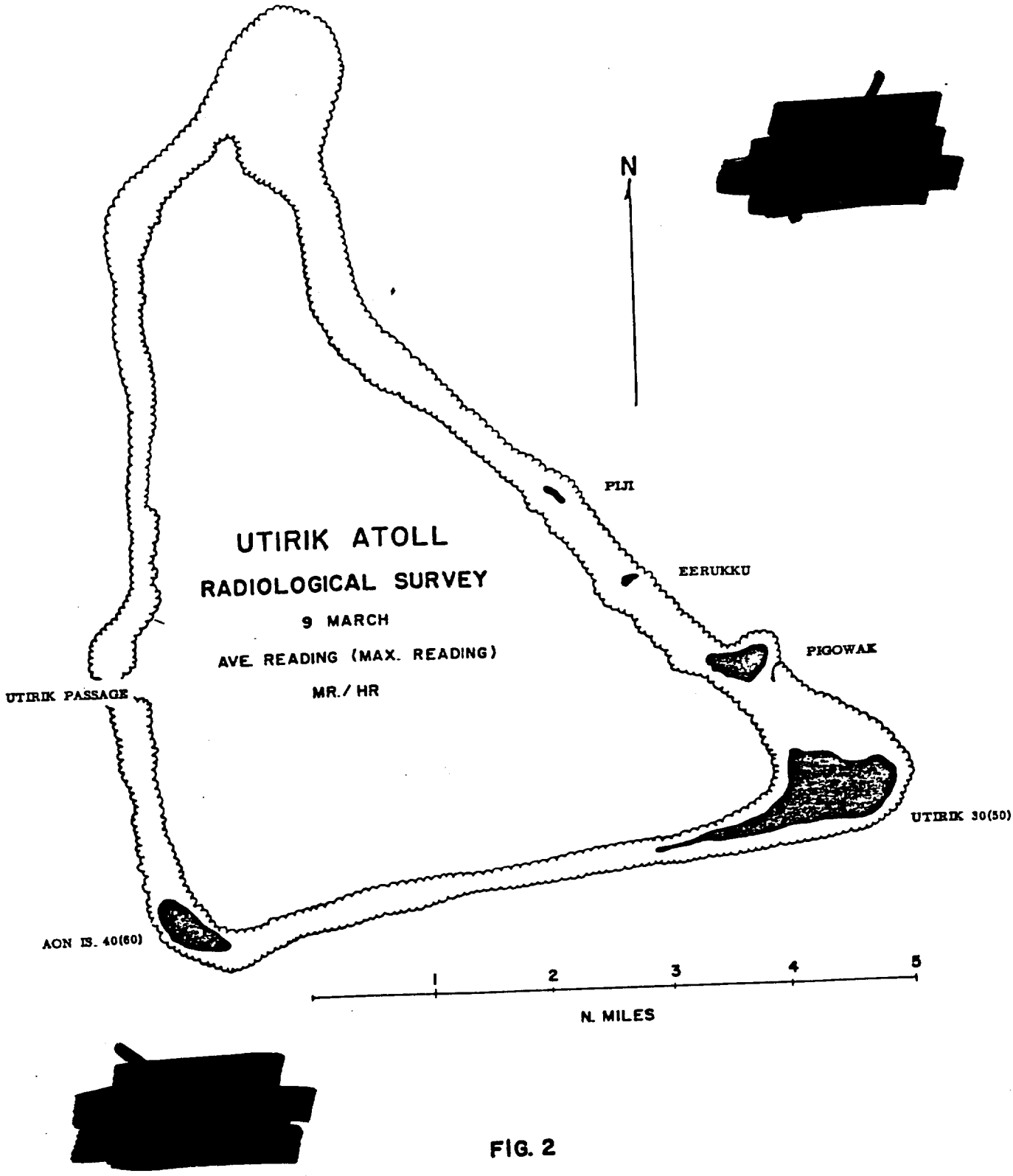

FIG. 2

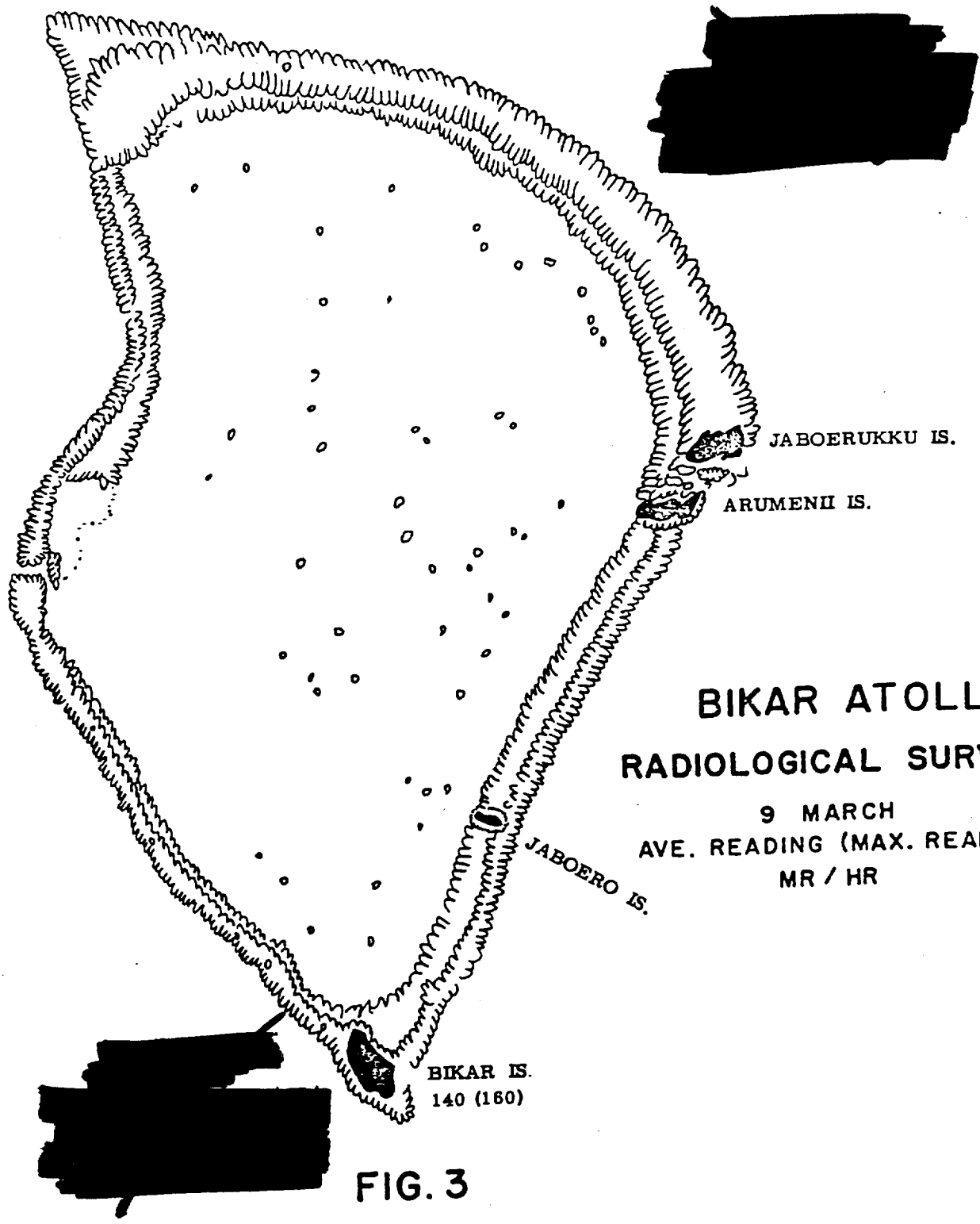

FIG. 3

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AILINGINAE ATOLL

RADIOLOGICAL SURVEY

10 MARCH

AVERAGE READING (MAX. READING)
MR/HR.

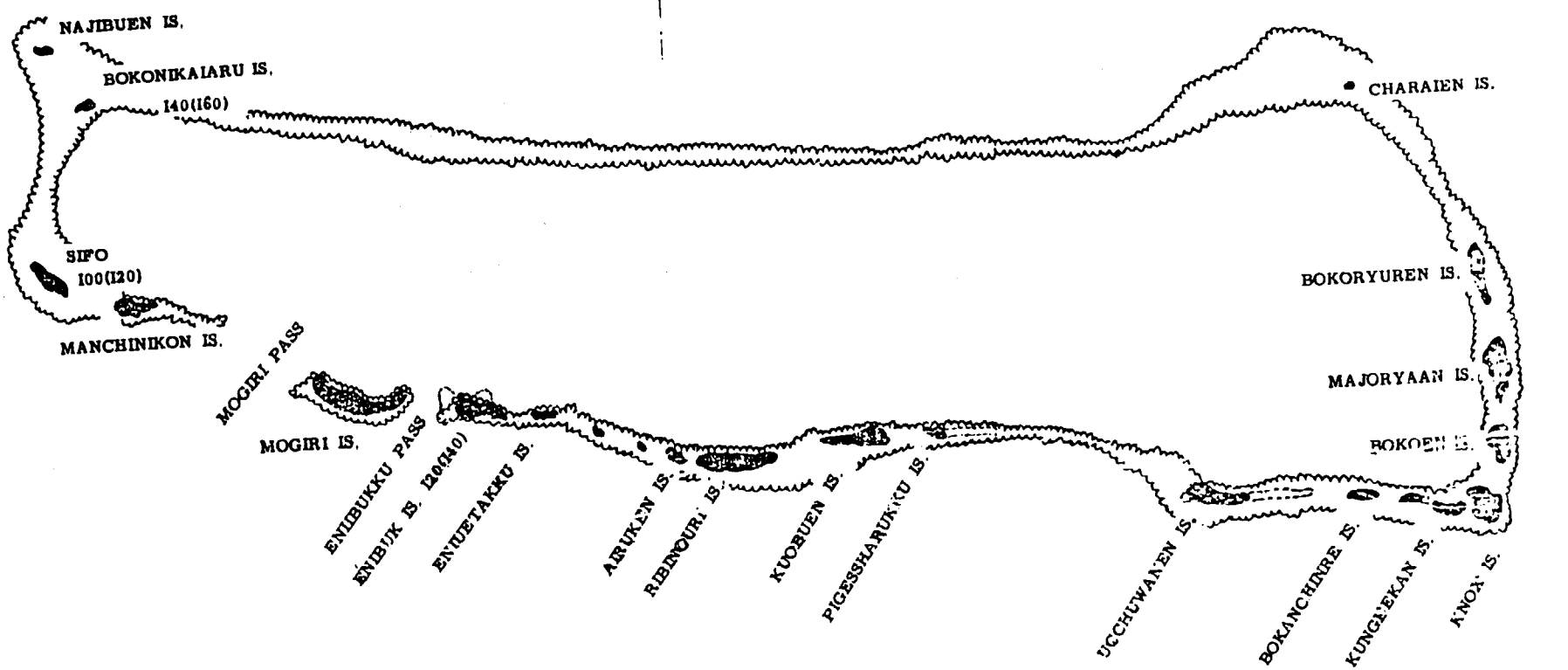

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FIG. 5

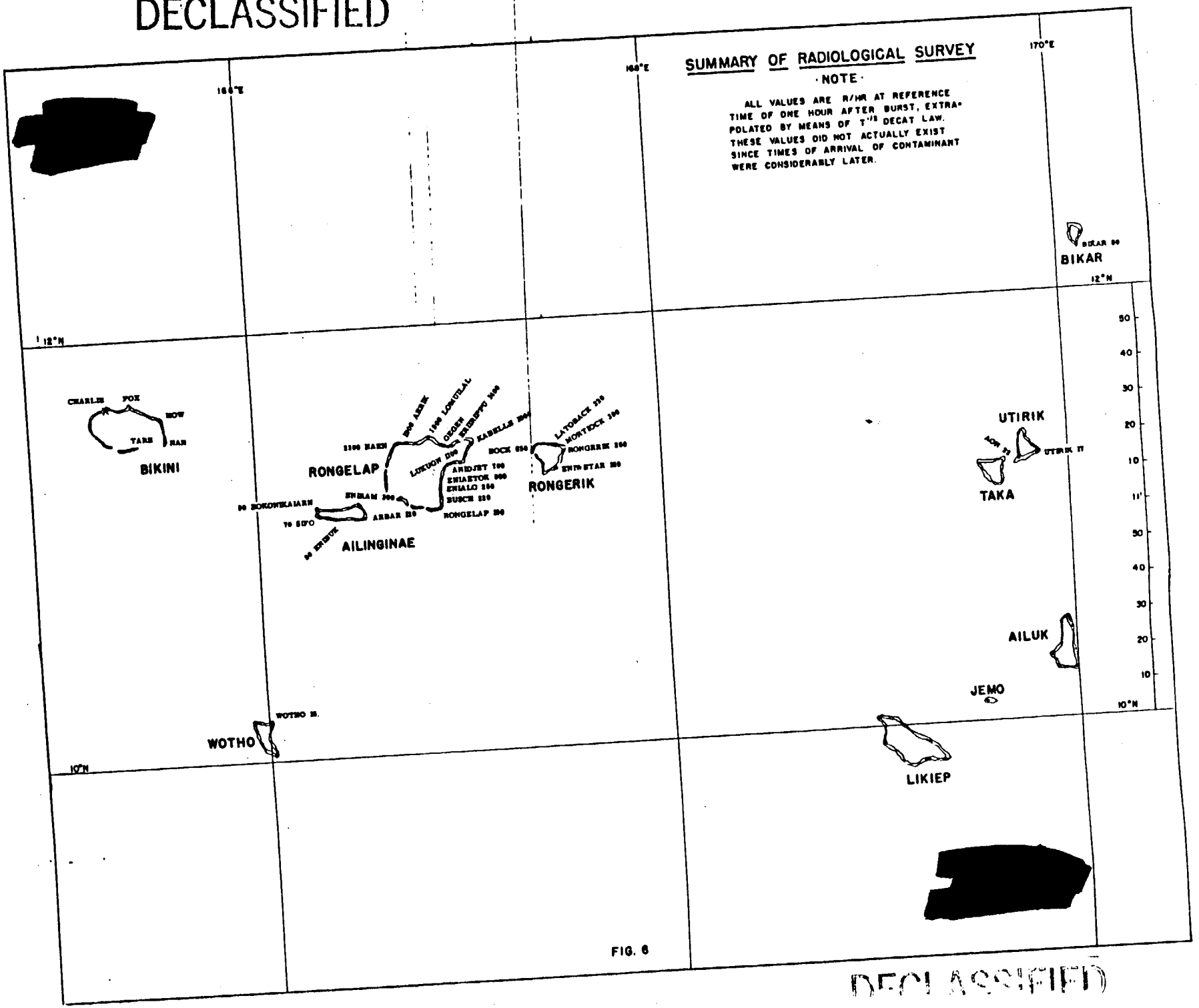

FIG. 6