

DR-1784-5

HW-3-5402 1

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14324

34 Pages

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 S. E. Gydesen, PNL Classification Officer
 March 14, 1986
 Authorization Records on file at
 Battelle - Pacific Northwest Laboratory
 Richland, WA 99352

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March 27, 1947

E. S. Baker 4/3/86

THE TREND OF CONTAMINATION OBSERVED IN THE AIR,

HW--3-5402

COLUMBIA RIVER, AND VEGETATION, AT THE HANFORD ENGINEER WORKS

DE86 008451

FOR 1946

AEC RESEARCH AND DEVELOPMENT REPORT

+ (21 graphs) dated 3-15-47, 3-3-49
 + (10 photostats) 7-3944-5-3-8
 7-4554-5-6, 7-5049, 8-5101, 3-520.

The attached graphs and off-area vegetation maps illustrate the trend of contamination levels around the Hanford Engineer Works for the year 1946.

Graphs I through VIII indicate the trend of contamination observed in vegetation at Pasco, Kennewick, Benton City, Columbia Camp, Richland, Gable Mountain, Hanford, and near the 200-E Area (Rt. 4S, Mile 4).

A one gram sample of the vegetation, taken at these locations, is mounted on cardboard and counted directly with a thin window chamber connected to a scaling unit. Correction is made for the counting geometry, self-absorption in the vegetation, and sample decay for the period between sampling and counting. It is then evaluated on a comparative basis in pc/kg.

Graphs IX through XVI indicate the trend of contamination observed in Columbia River water at 181-B, 1904-B, 181-D, 181-F, 107-D and 107-F, Hanford, 300 Area and Richland. Along with this, there is plotted the estimated flow rate of the Columbia River in gallons per second.

A 500 cc sample of Columbia River water, taken at these locations, is evaporated into a watch glass and counted with a thin window chamber connected to a scaling unit. Correction is made for the counting geometry and sample decay for the period between sampling and counting. It is then evaluated on a comparative basis in pc/liter.

Graphs XVII through XX indicate the trend of contamination observed in the air near the working areas and at Hanford, Benton City, Pasco and Kennewick.

For comparison, there has been included a graph (XXI) with the estimated number of I-131 curies dissolved at the Separation plants per week.

LDF:awc

L. D. Turner
 L. D. Turner

MASTER

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CLASSIFICATION CHANGED TO	<i>66</i>
	<i>H.R. Canale</i>
	Chief, Declassification Branch
DATE	MAR 5 1957

SPECIAL RE-REVIEW
FINAL DETERMINATION
DECLASSIFICATION CONFIRMED
BY *RF Barker* DATE *3-01-82*
BY _____ DATE _____

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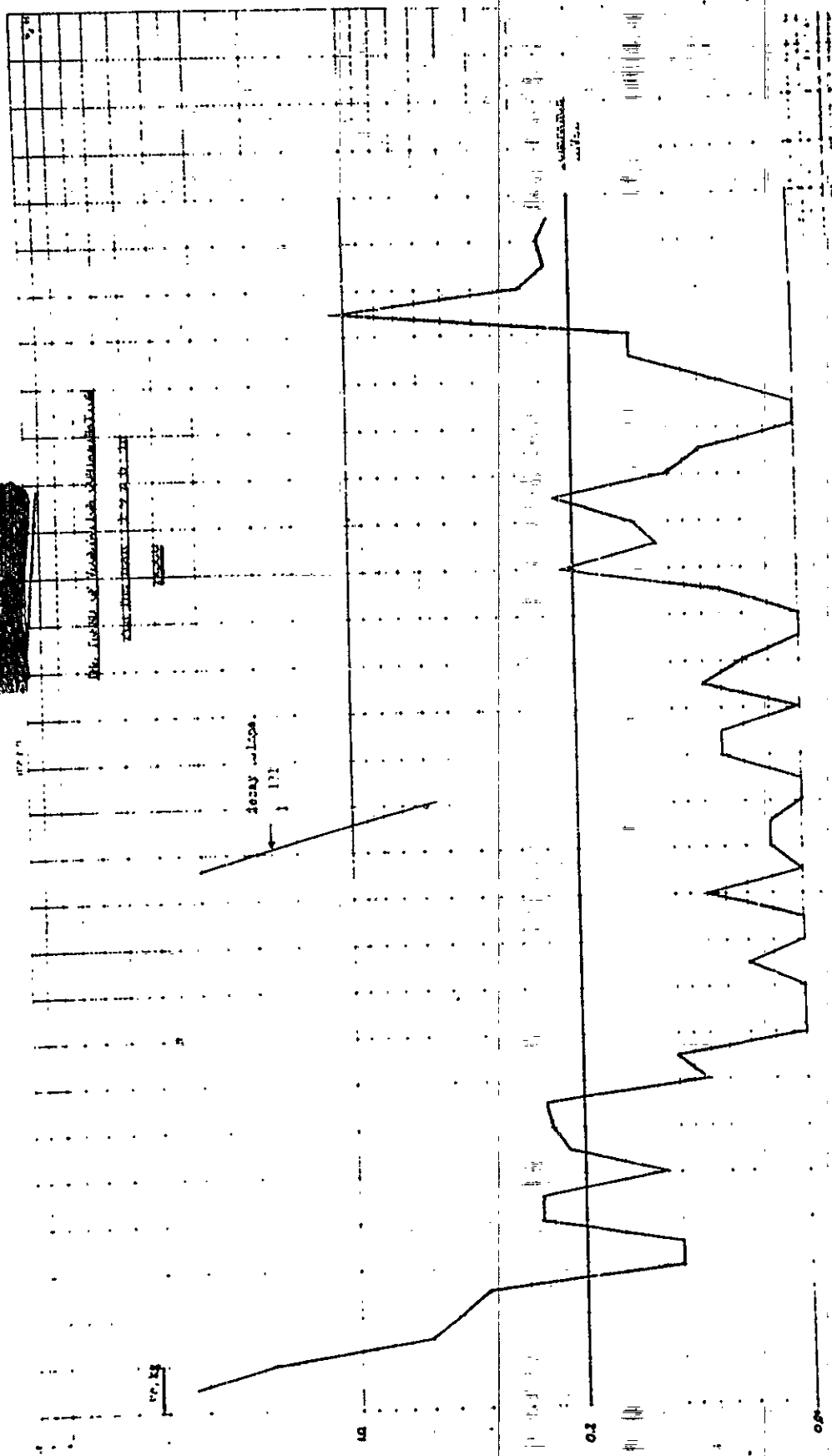
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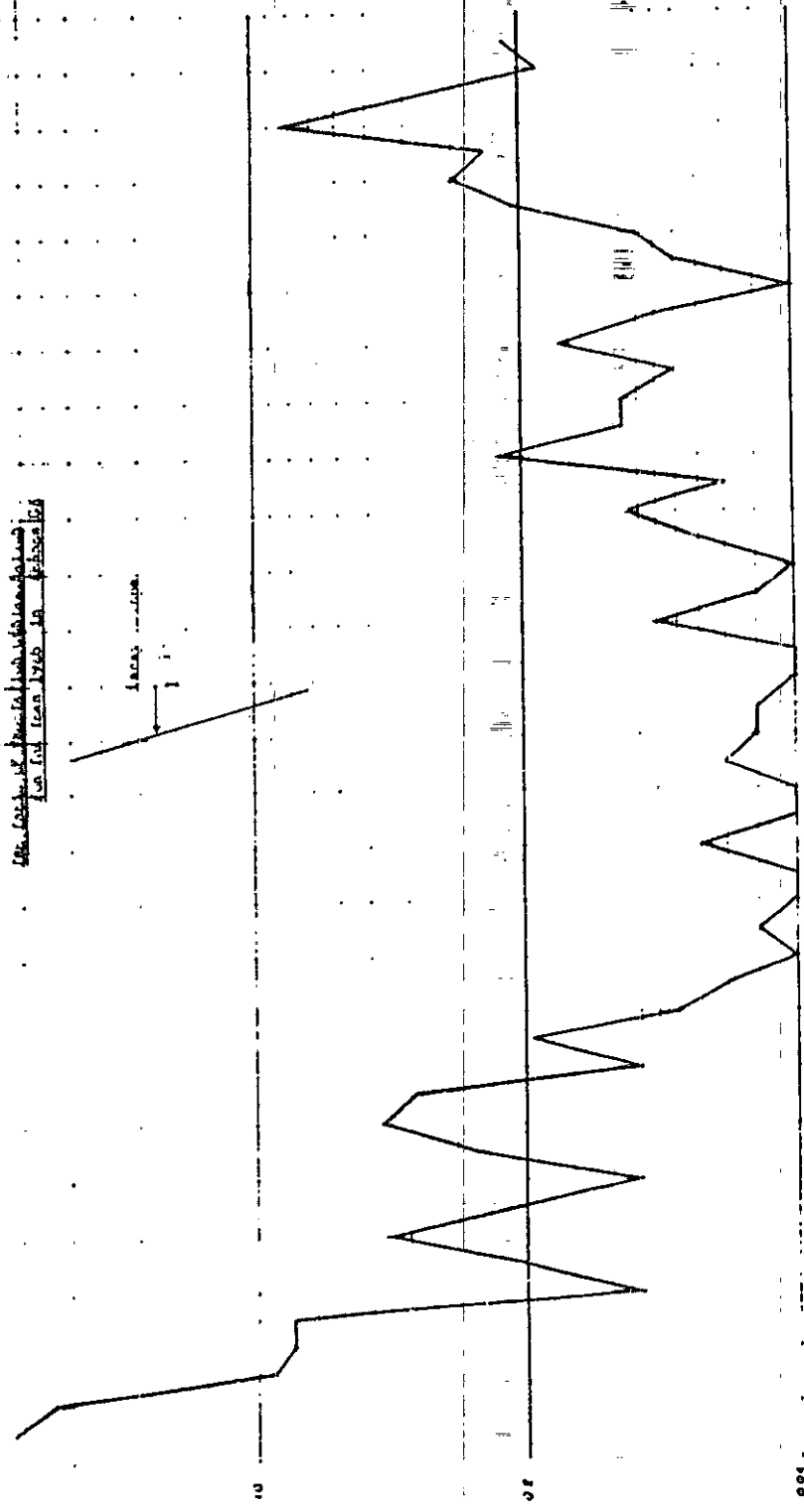
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100-1000



The following information was obtained
on 10 Jan 1966 in [redacted]

100-1000



100-1000 5.

24

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6.

THE POWER OF VOLUNTARY CALCULATIONS

2004 2007 2008 1946 1947

REPLY TO

100-443887

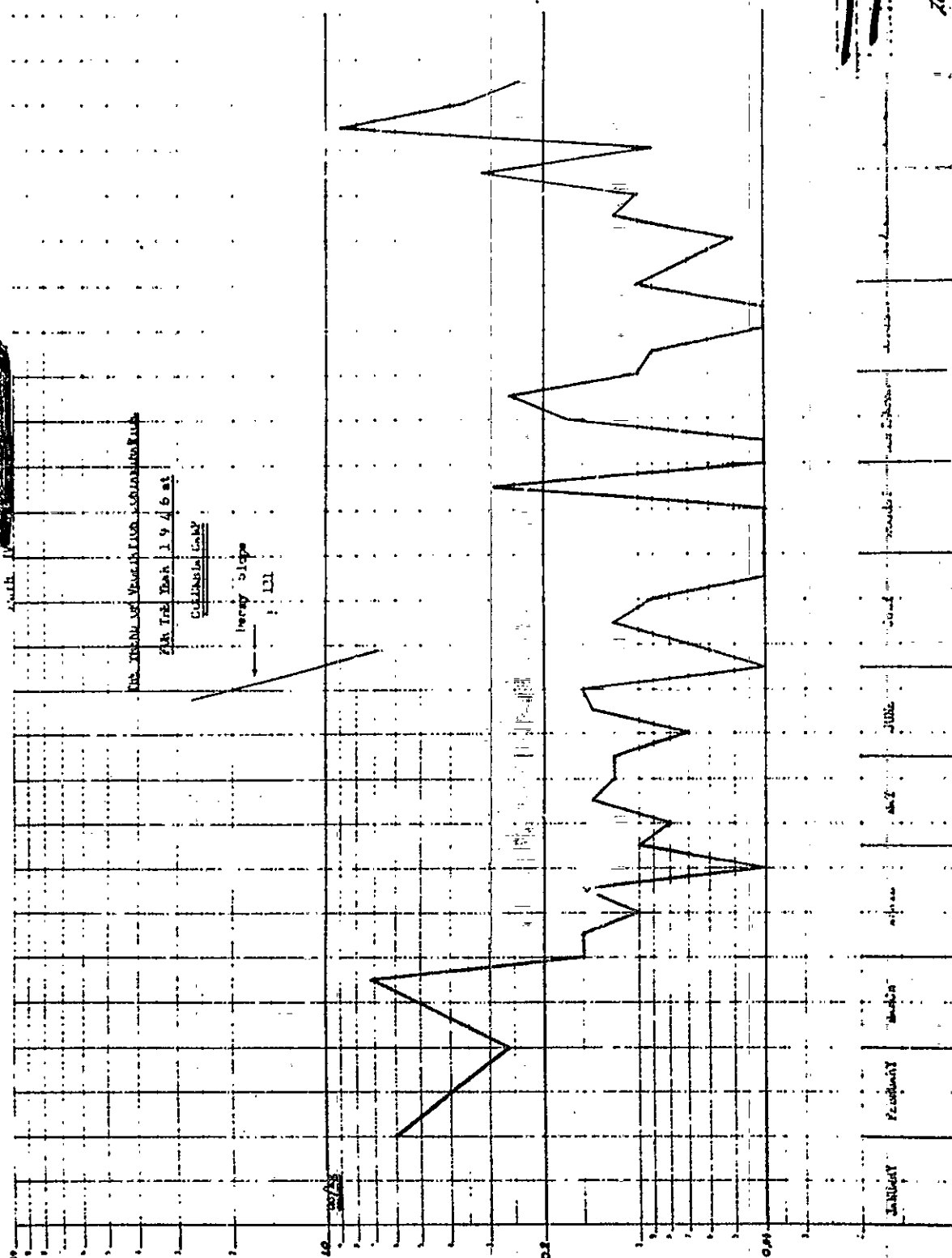
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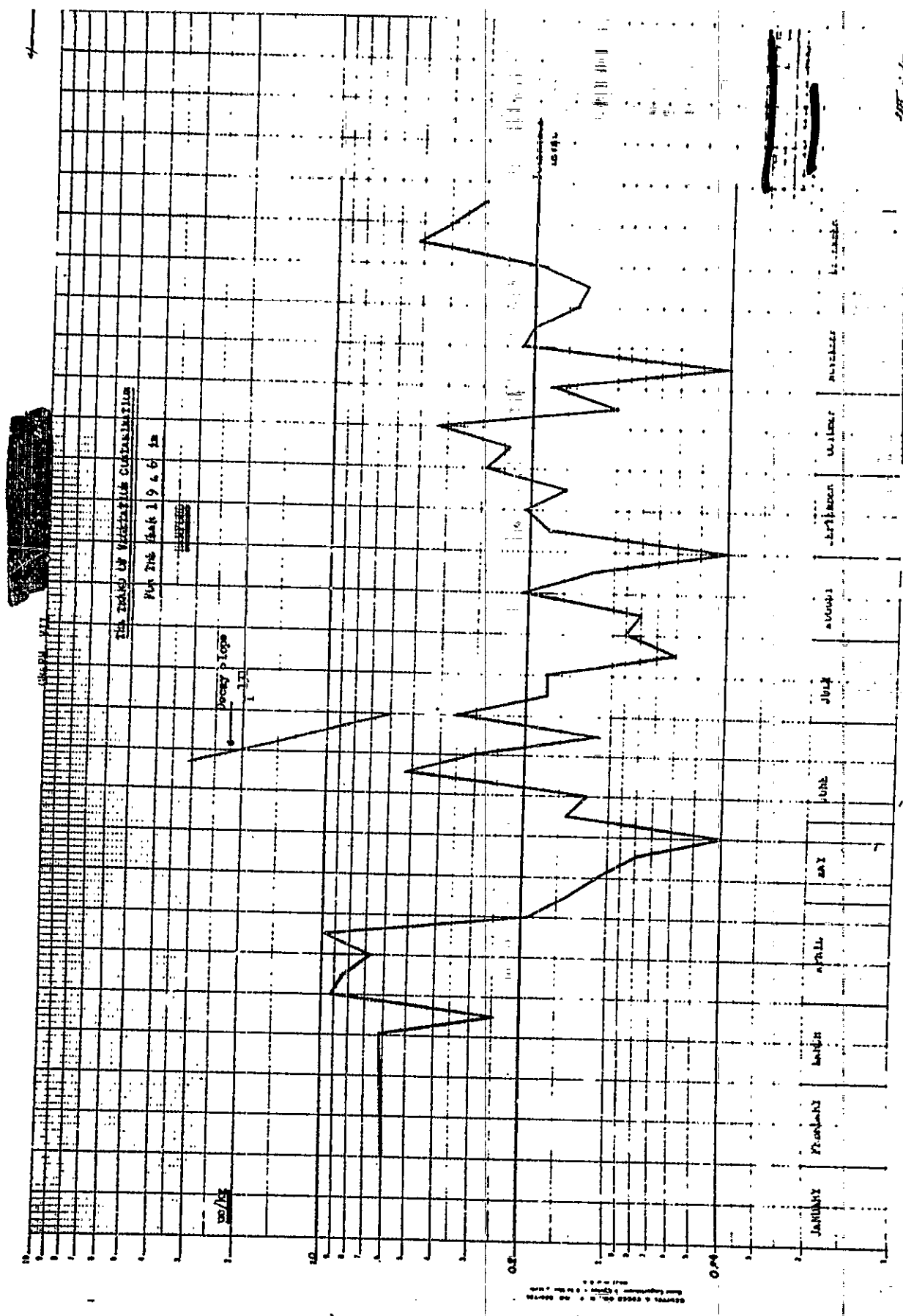
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Dr. J. H. H. H.

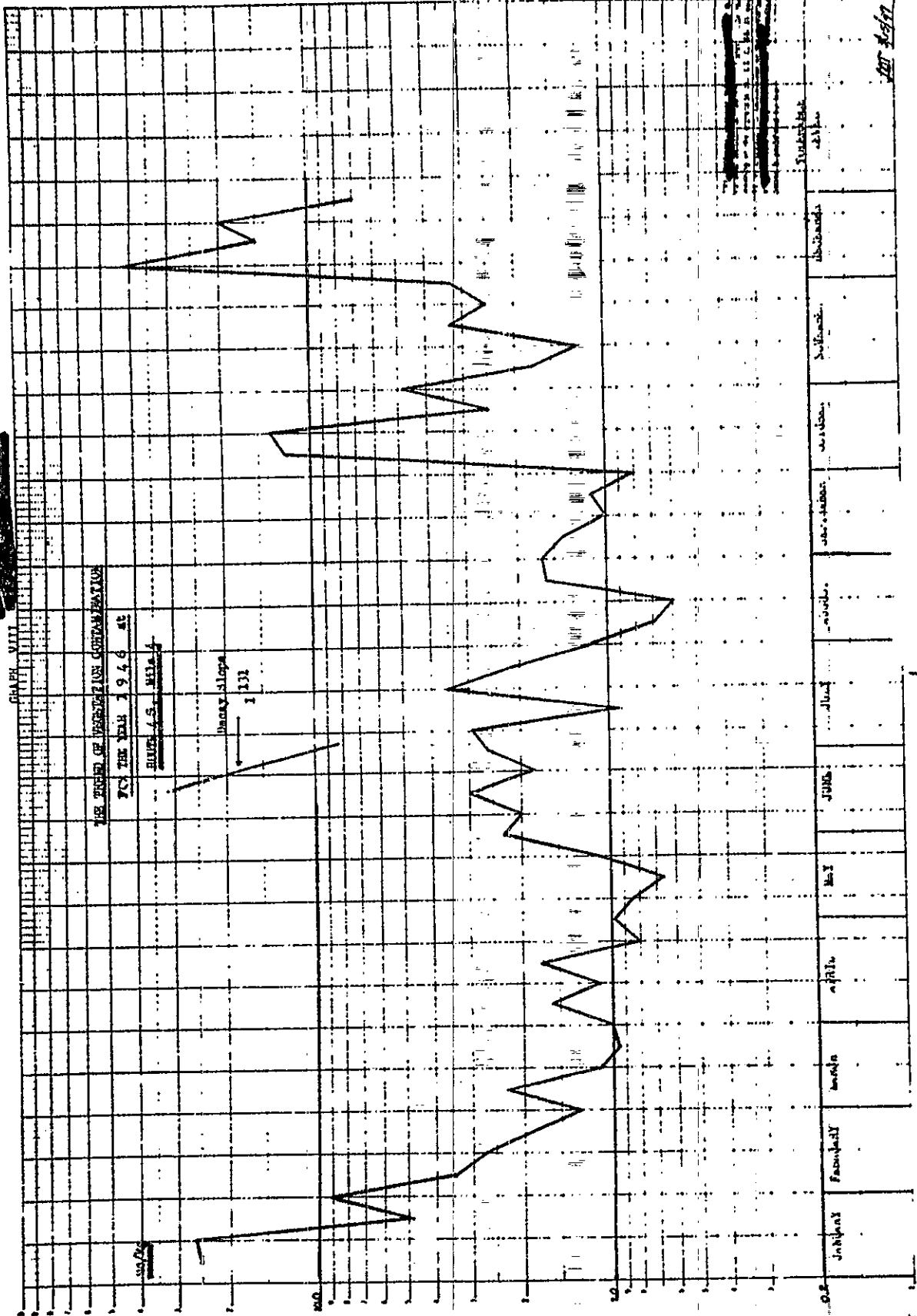
207 3/5/47





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9-11-46



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9440

XXI
G. H. C.

ESTIMATED NUMBER OF COUNTRIES OF THE DISARMED/RE-ARMED
AT THE DISARMED/RE-ARMED

7000

6000

5000

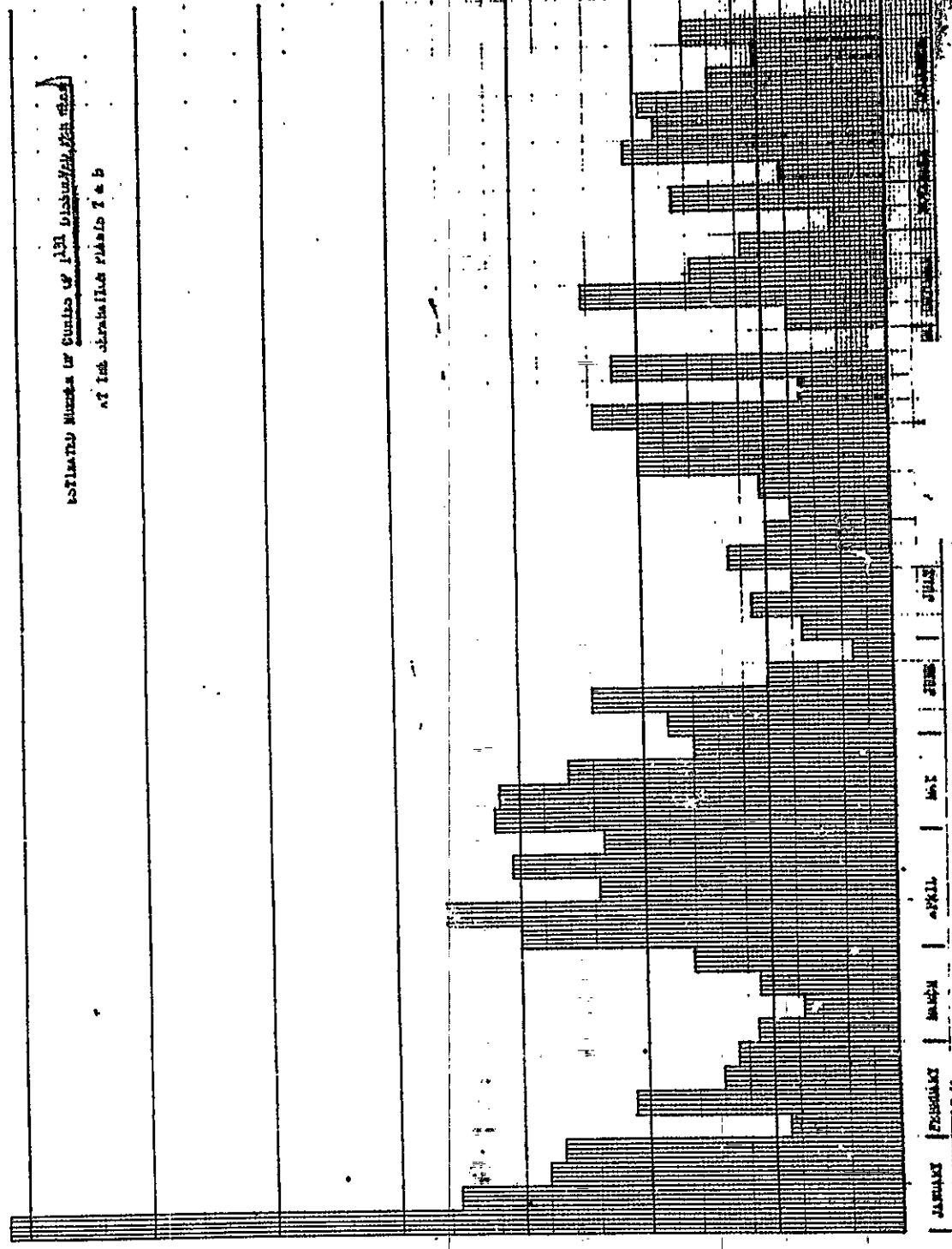
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3000

2000

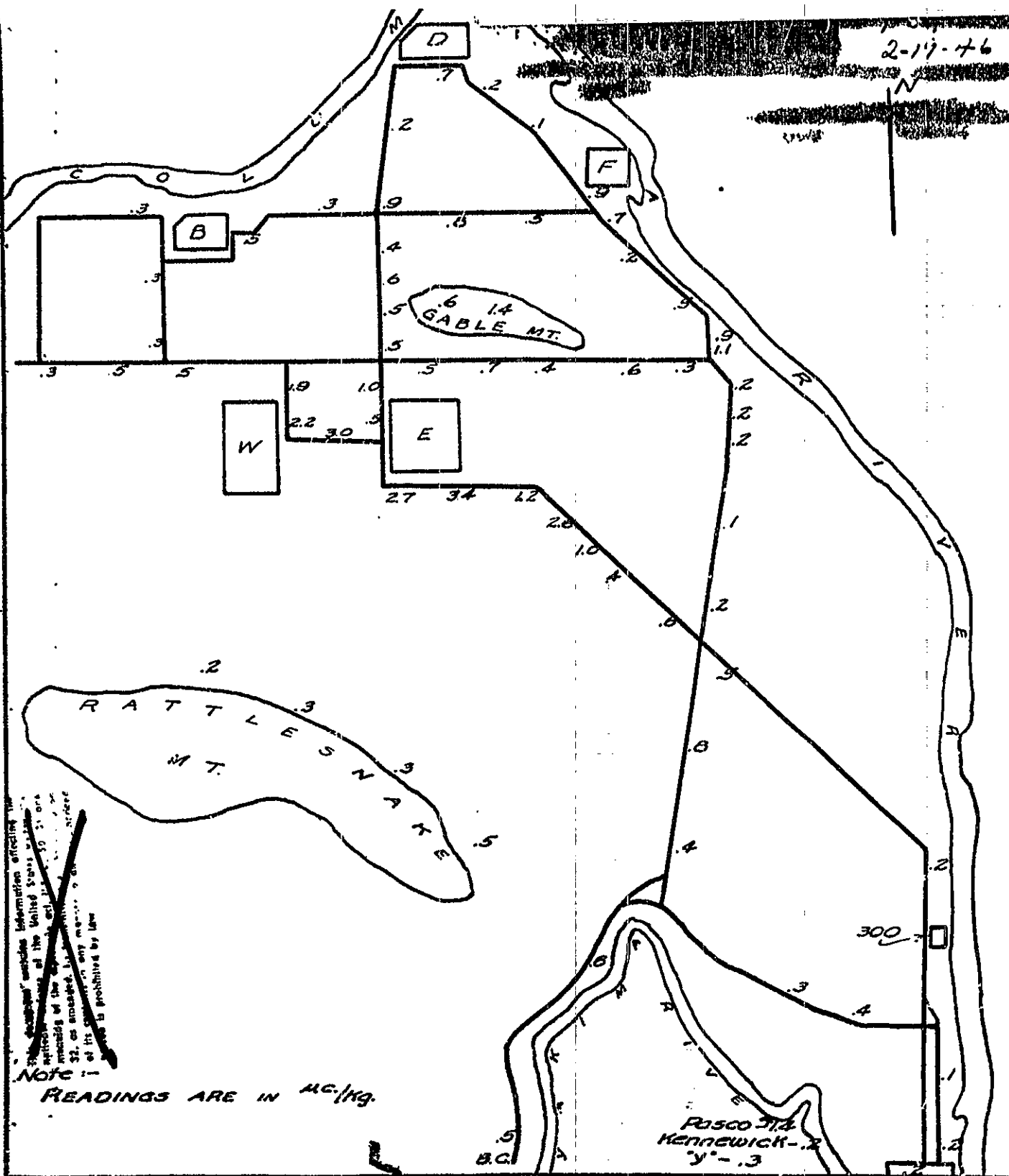
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08/1/80

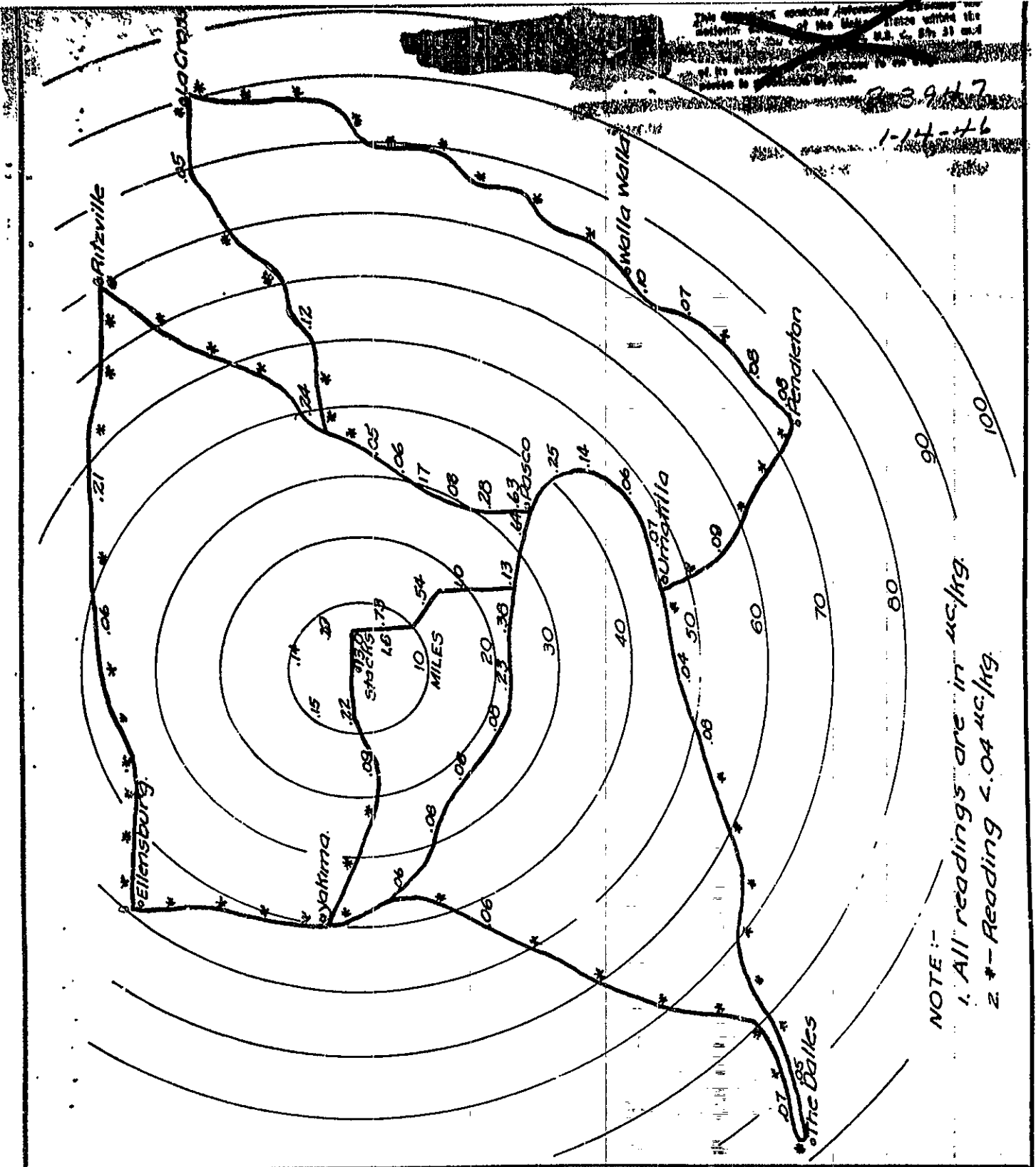


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Note: -
READINGS ARE IN $\mu\text{C}/\text{kg}$.

HANFORD ENGINEER WORKS <i>Extent of Vegetation Contamination.</i>	APPROVED	DATE <u>2-19-46</u>	DRAWN BY <u>J.M.C.</u>
		CHECKED	BLDG. NO. <u>2707</u>
		DWG.	<u>24V80</u>
		NO <u>Week Ending 2-19-46</u>	

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This document contains information concerning the
operation of the Hanford Station within the
U.S. & 84% of the
of its resources and is to be
passed to the public.

8-3-947
1-14-46

NOTE:-
1. All readings are in $\mu\text{C}/\text{kg}$
2. -- Reading $< 0.04 \mu\text{C}/\text{kg}$

HANFORD ENGINEER WORKS EXTENT OF VEGETATION CONTAMINATION	APPROVED	DATE 1-14-46	DRAWN BY J.M.C.
		CHECKED	BLDG. NO. 2707
	DWG. NO	Week Ending 1-14-46	25 V 80

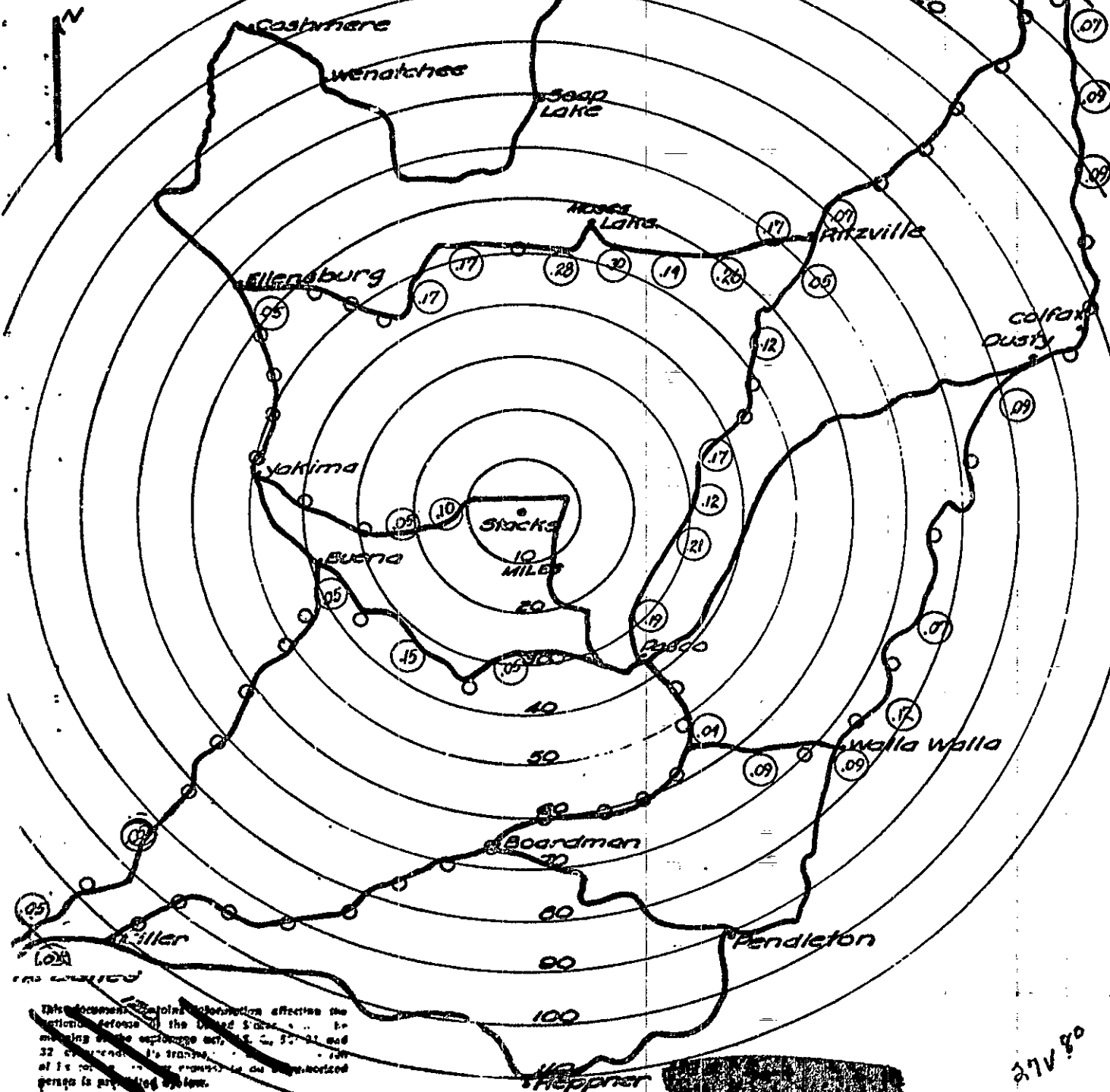
KILHAM 948368 DIRTZGER 102-L

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PLANEFORD ENGINEER WORKS
EXTENT OF
VEGETATION CONTAMINATION

DATE APRIL 13 1946 DRAWN BY LDT
CHECKED _____ BLSG NO. _____
DWG. NO. ALL VALUES IN MC/KG

Q INDICATES VALUES $< 0.09_{\text{mg/kg}}$



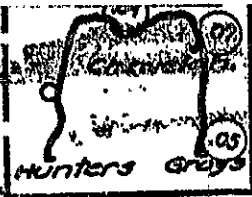
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27V80

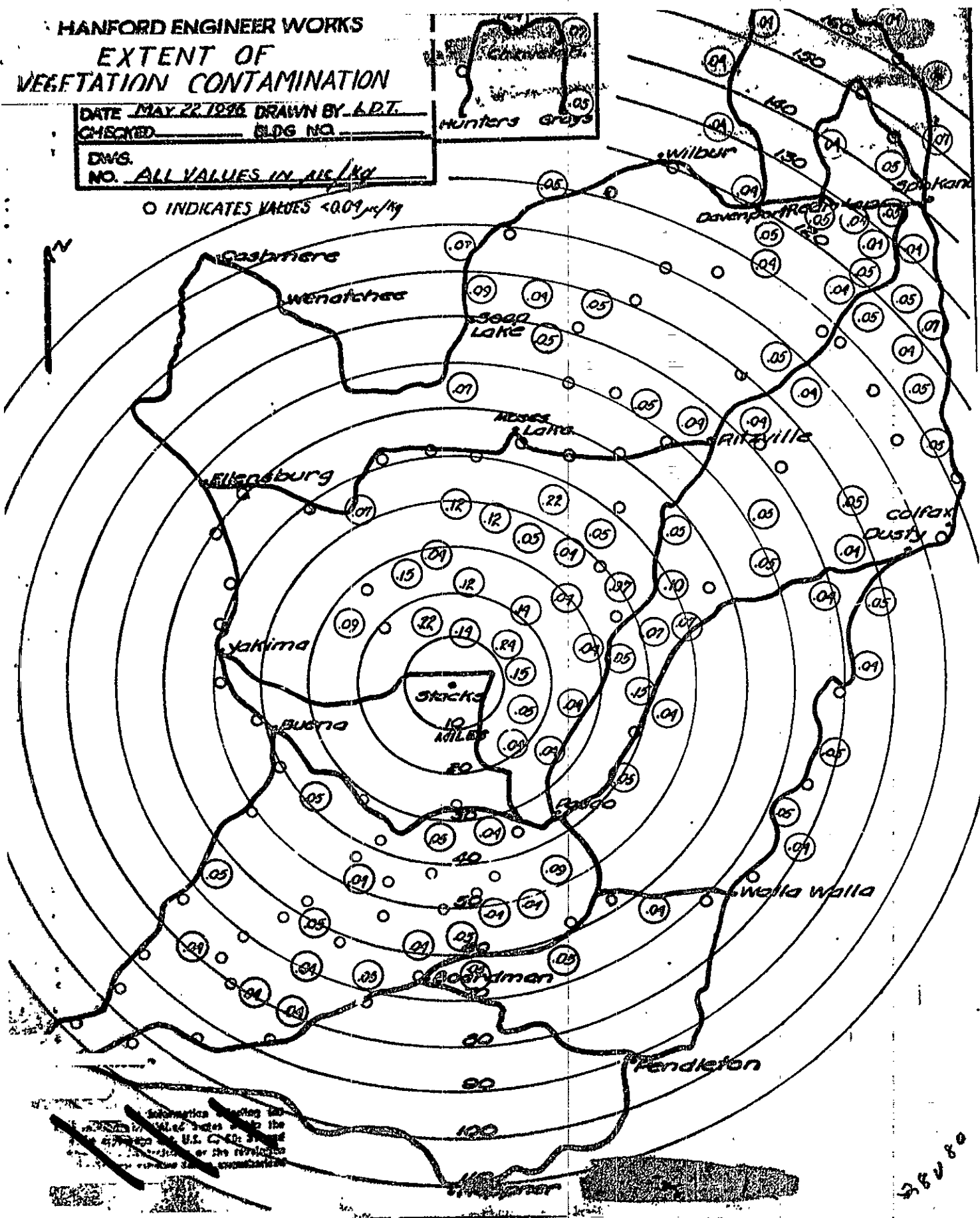
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HANFORD ENGINEER WORKS EXTENT OF VEGETATION CONTAMINATION

DATE MAY 22 1986 DRAWN BY L.D.T.
CHECKED _____ BLDG NO. _____
DWS.
NO. ALL VALUES IN AIR/Kg



○ INDICATES VALUES <0.01 µg/Kg



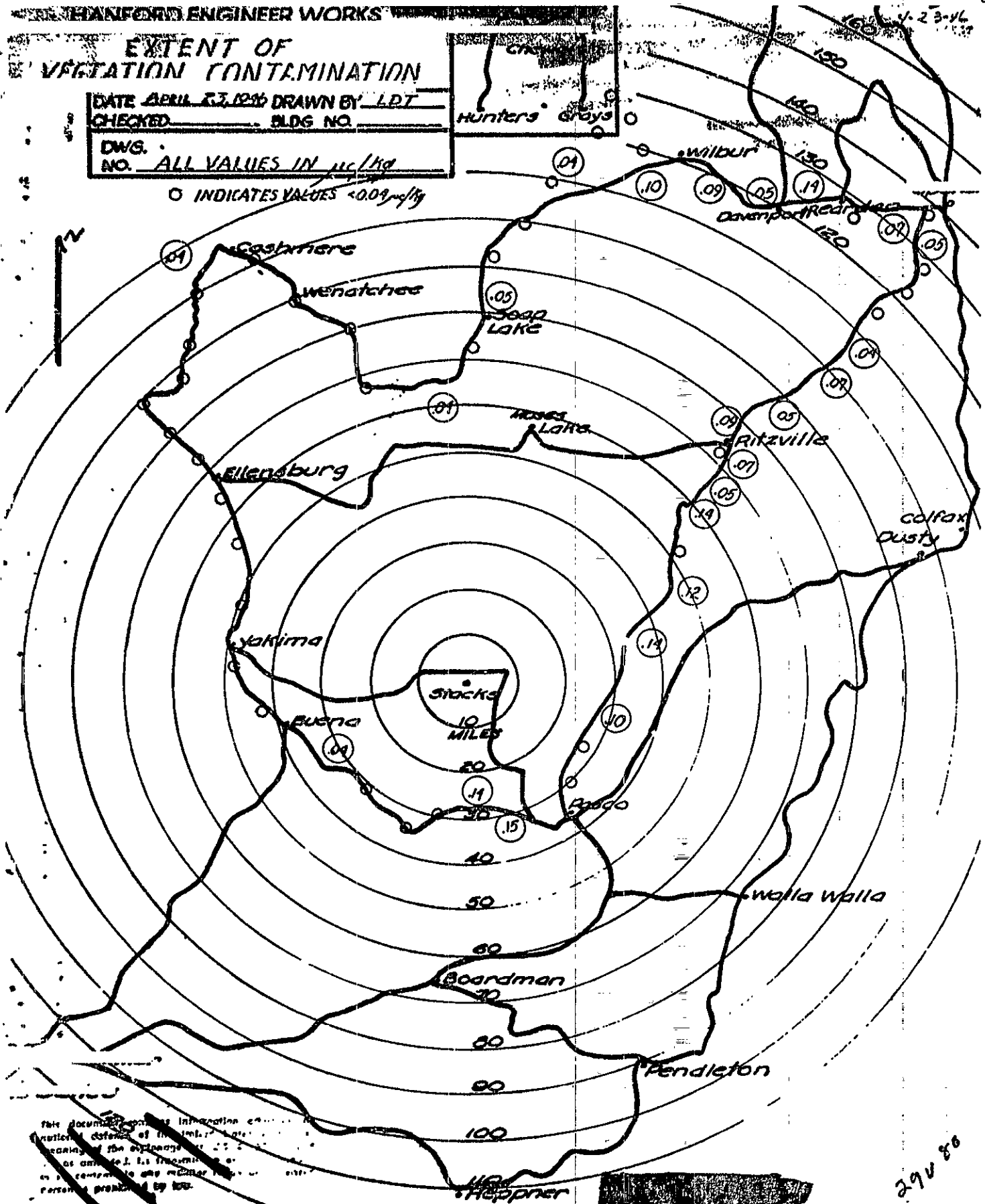
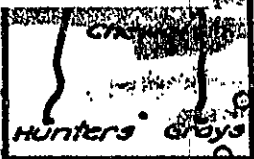
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HANFORD ENGINEER WORKS

EXTENT OF VEGETATION CONTAMINATION

DATE APRIL 23, 1956 DRAWN BY LDT
CHECKED BLDG NO.
DWG. NO. ALL VALUES IN $\mu\text{C}/\text{kg}$

○ INDICATES VALUES $< 0.09 \mu\text{C}/\text{kg}$



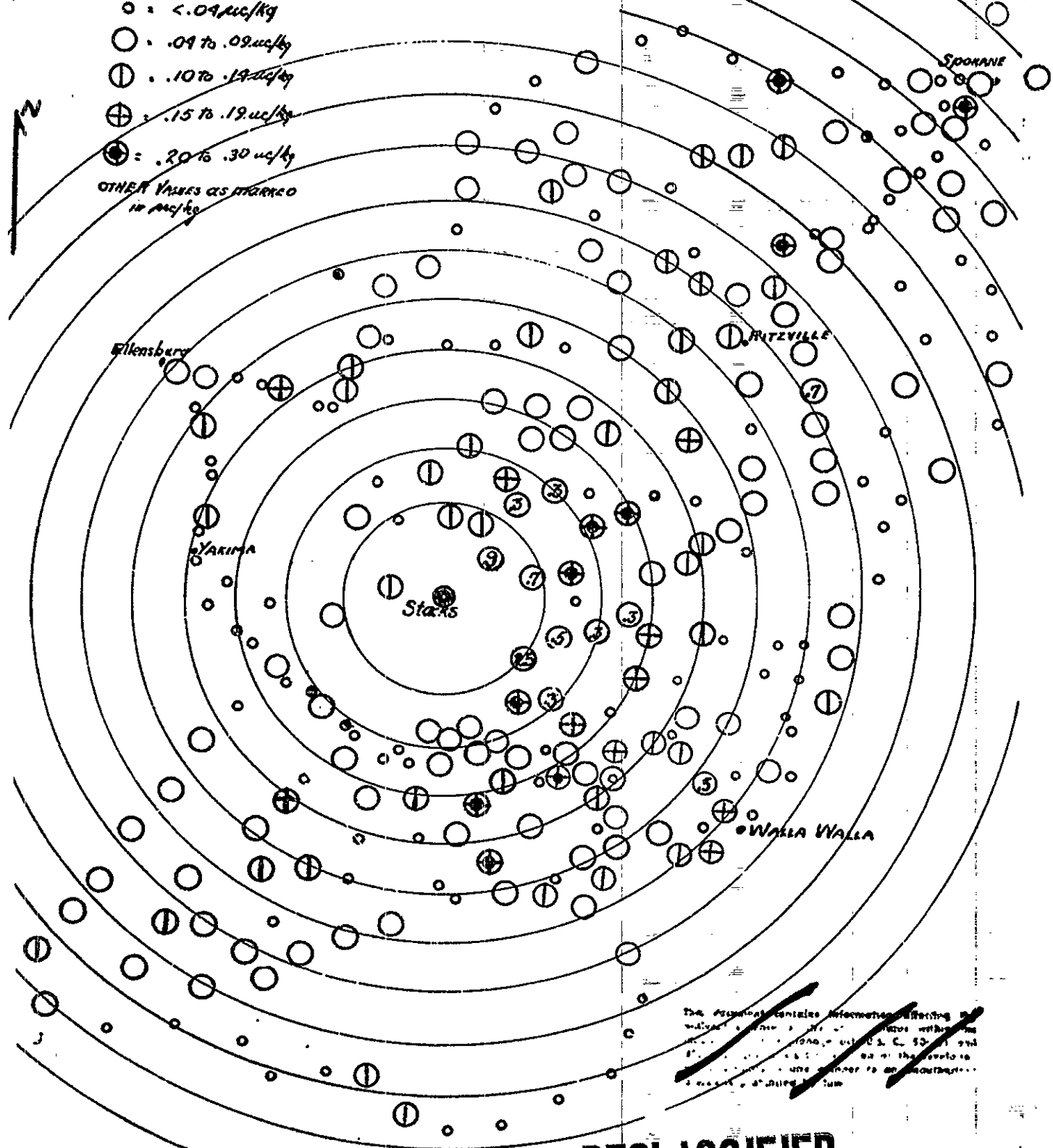
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HANFORD ENGINEER WORKS
OF **VEGETATION CONTAMINATION**
DEF AREA
DATE: **AUG 30, 1946** DRAWN BY: **LDT**

- = <.09 $\mu\text{C}/\text{kg}$
- = .09 to .09 $\mu\text{C}/\text{kg}$
- ① = .10 to .19 $\mu\text{C}/\text{kg}$
- ⊕ = .15 to .19 $\mu\text{C}/\text{kg}$
- ⊗ = .20 to .30 $\mu\text{C}/\text{kg}$
- OTHER VALUES AS MARKED
IN $\mu\text{C}/\text{kg}$

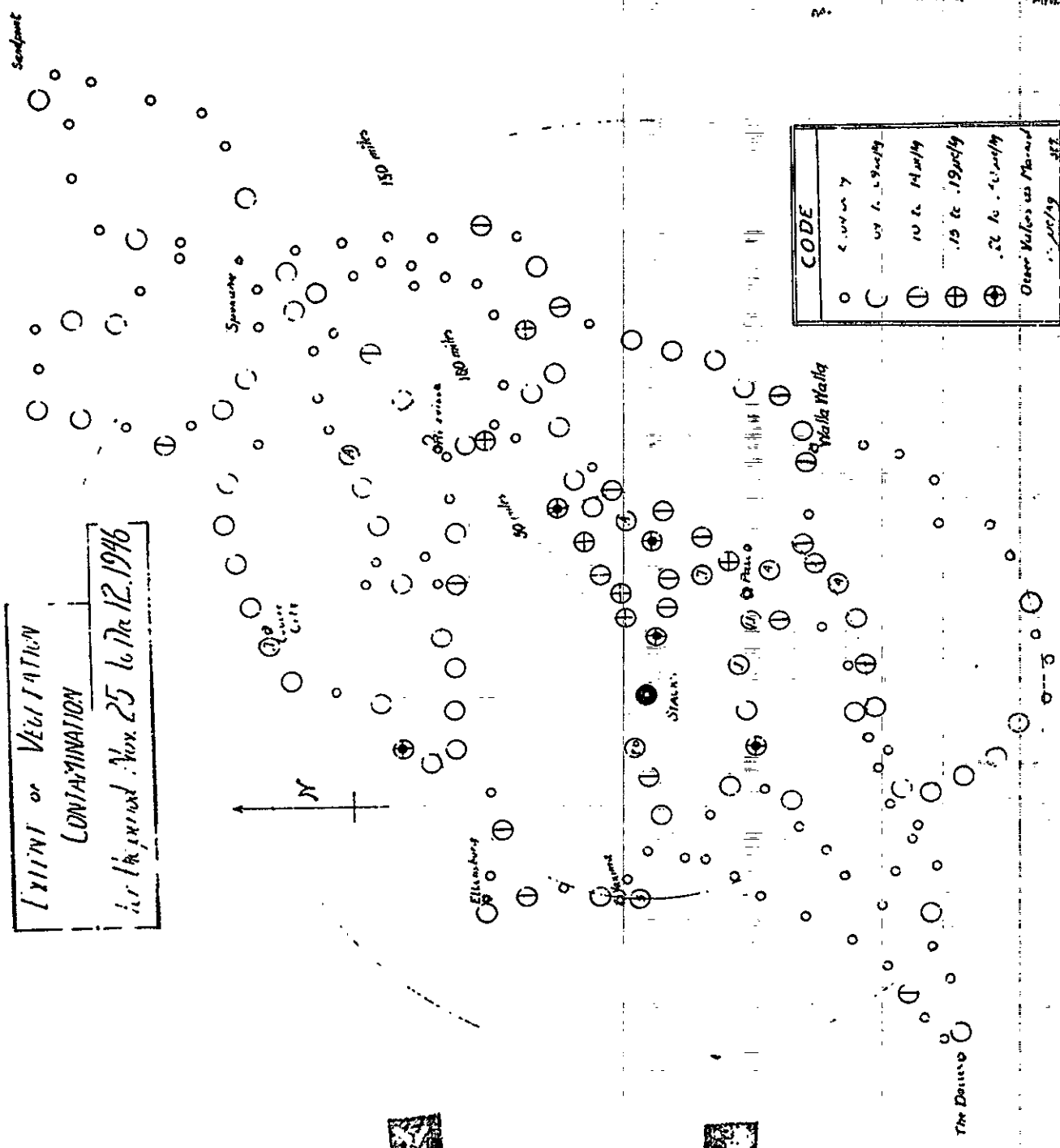


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12-251-499

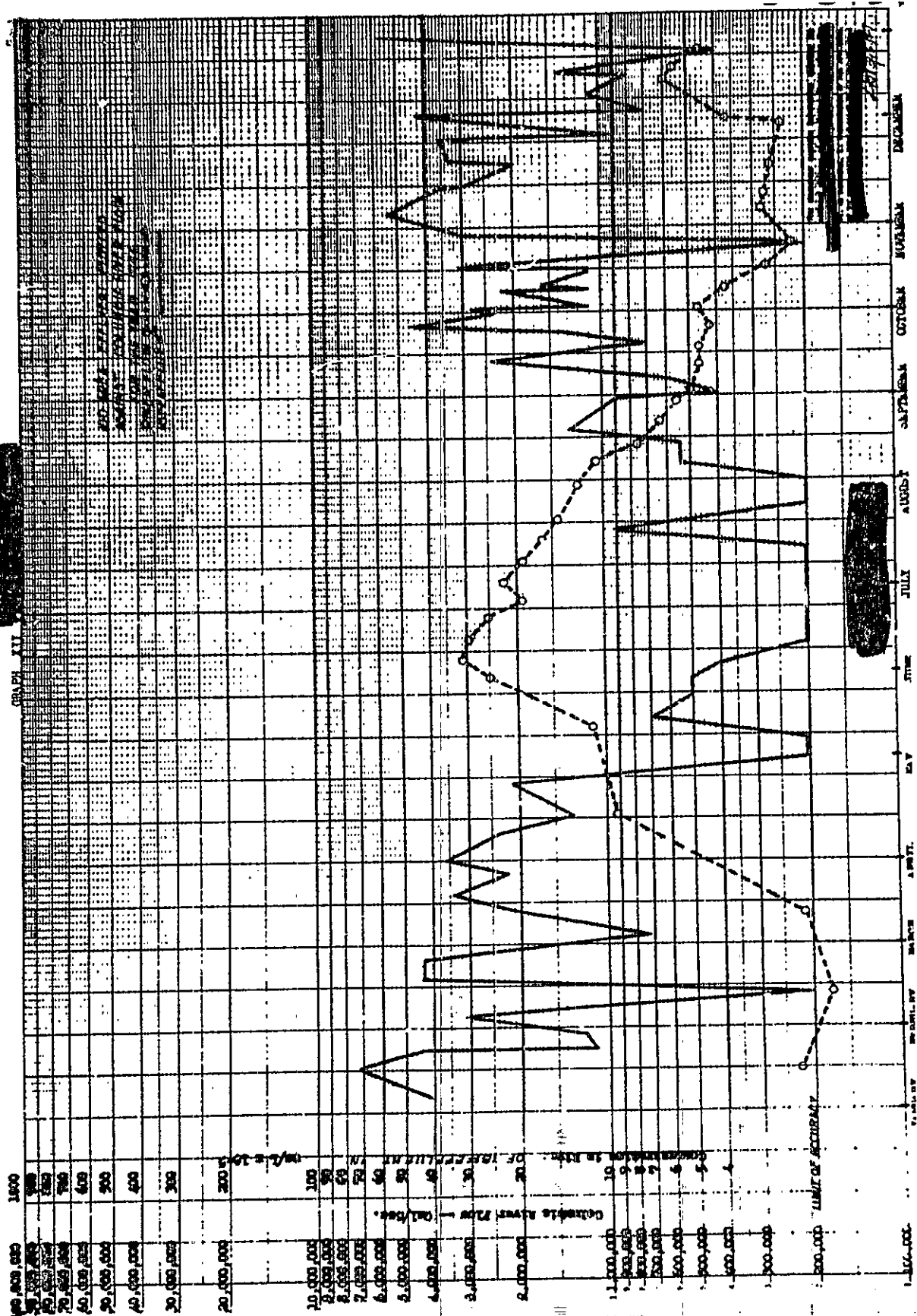
LIVING or VEGETATION
 CONTAMINATION
 for the period Nov 25 to Dec 12, 1946



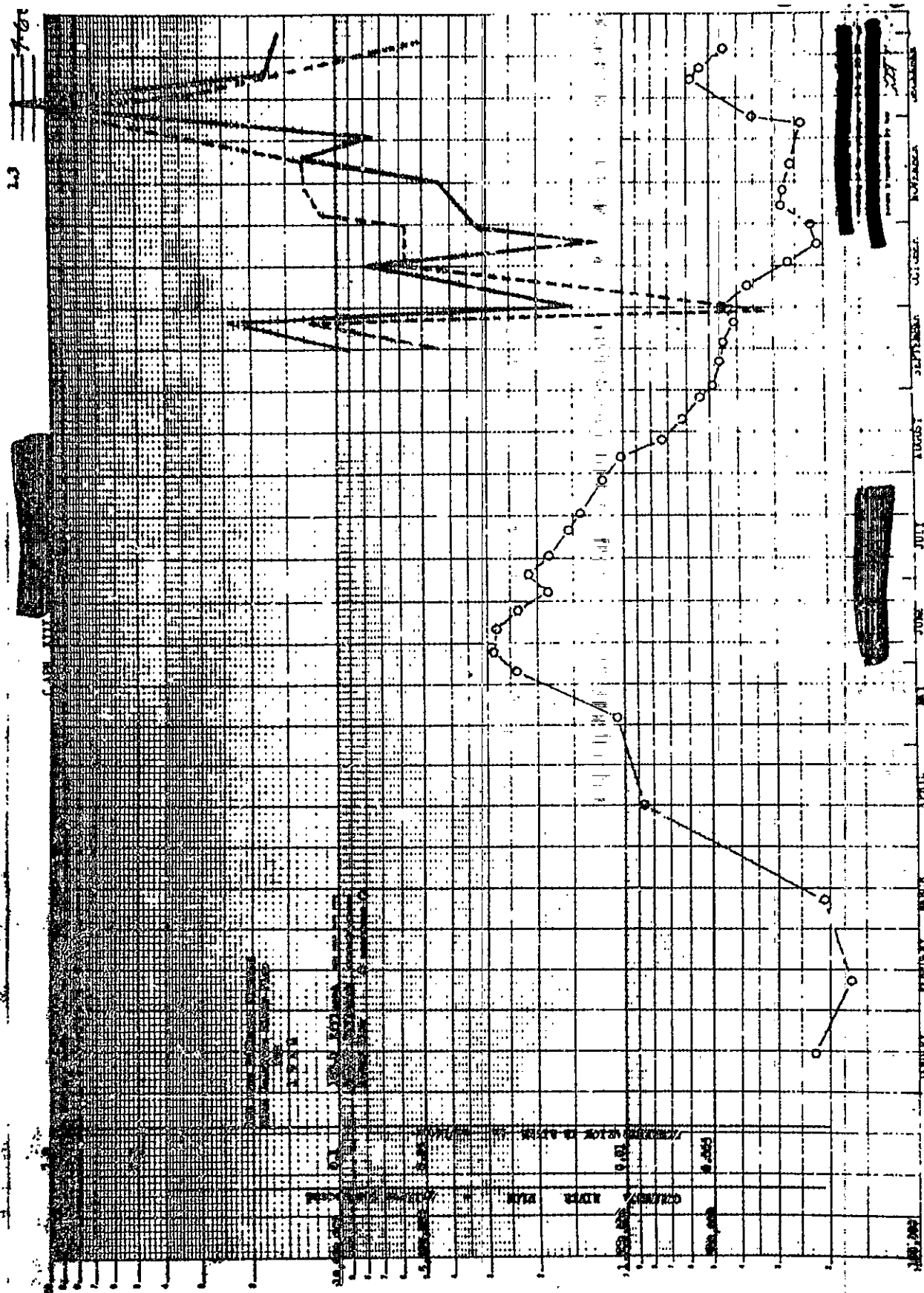
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7-6-68

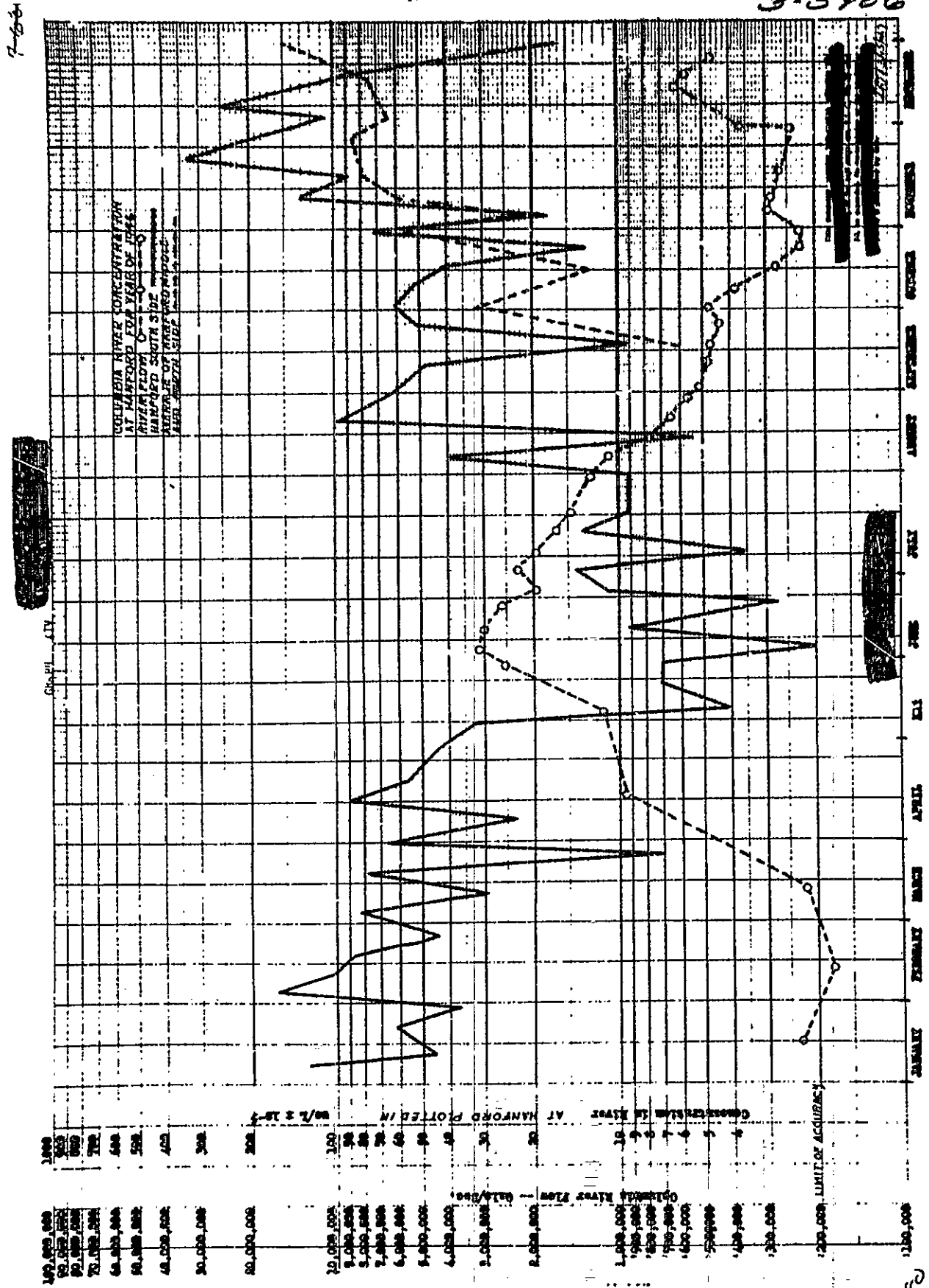


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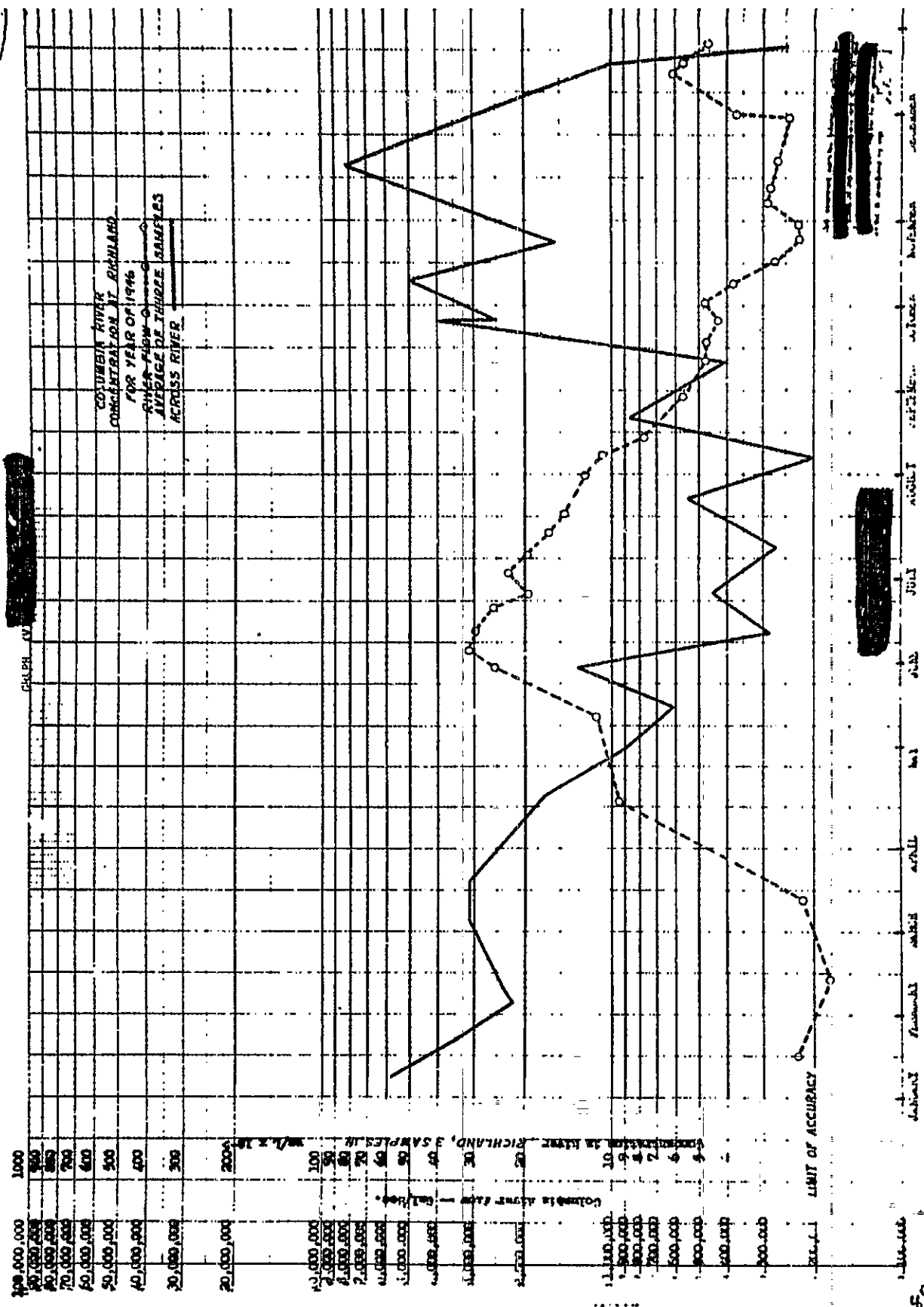


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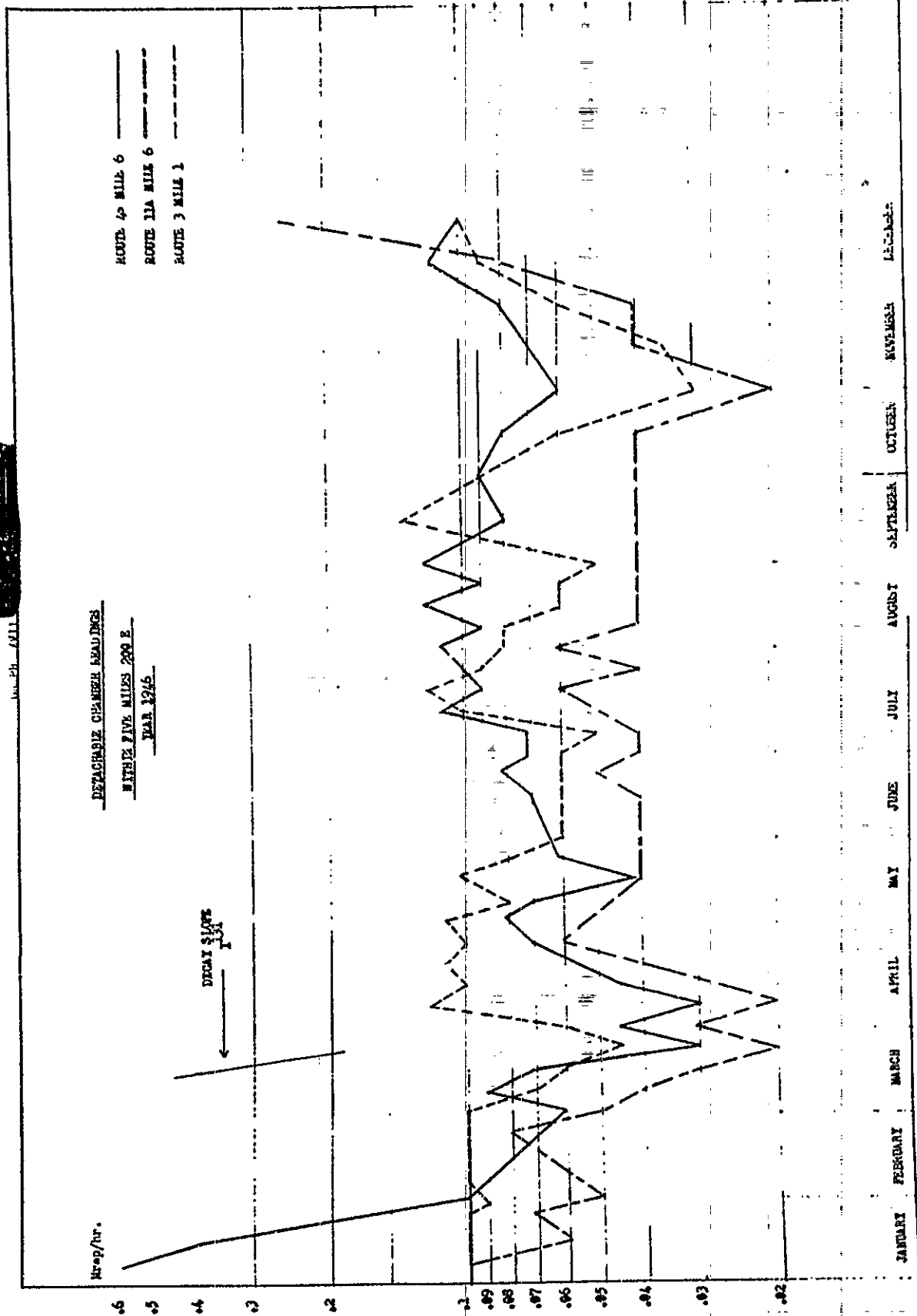
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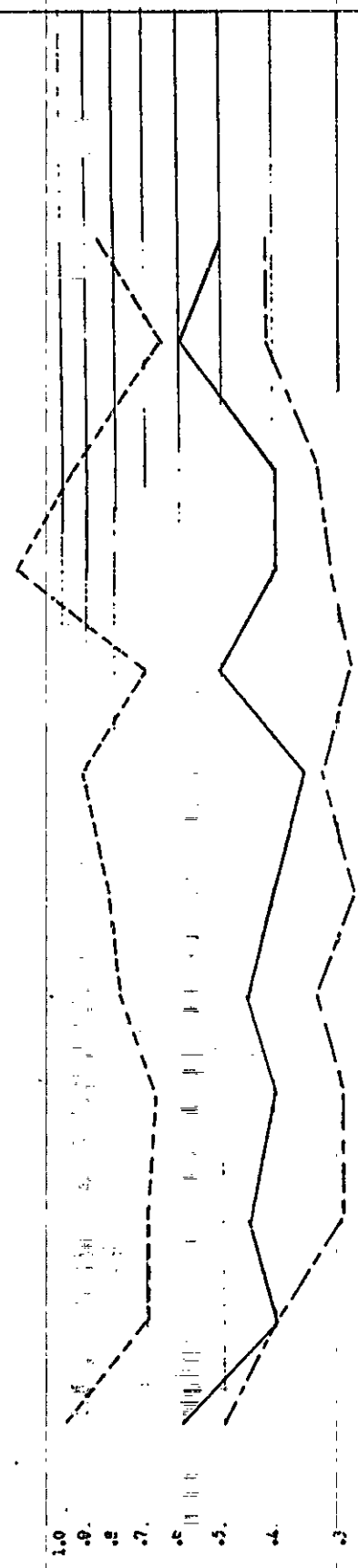
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3-5406

AVERAGE DOSE RATE RATES IN MGPF/24HRS
AS RECORDED ON "C" CHANGERS
FOR YEAR
1946

----- 200 EAST AREA
----- 200 WEST AREA
----- 100 AREAS (AVE. 'B' 'D' & 'F')

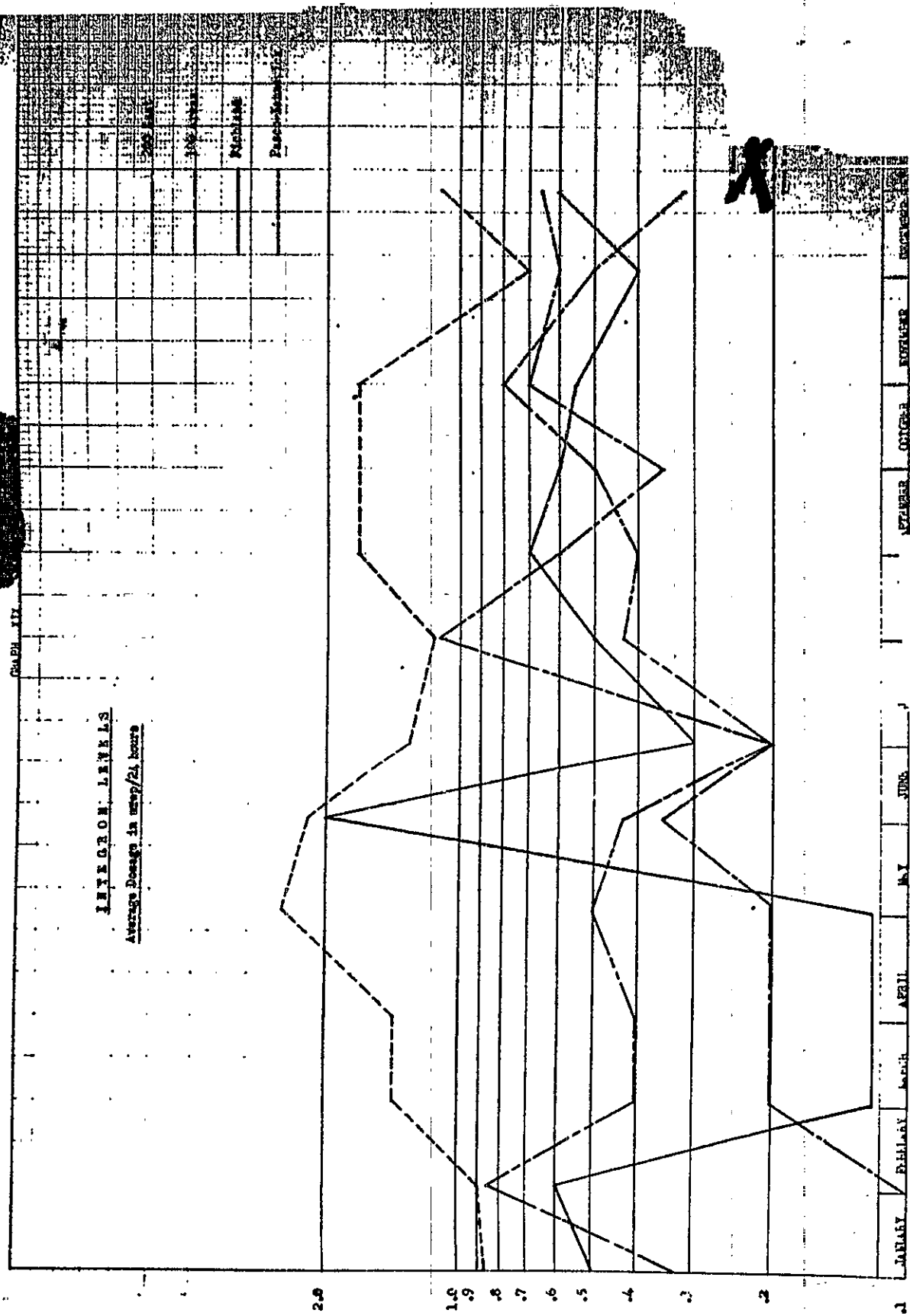
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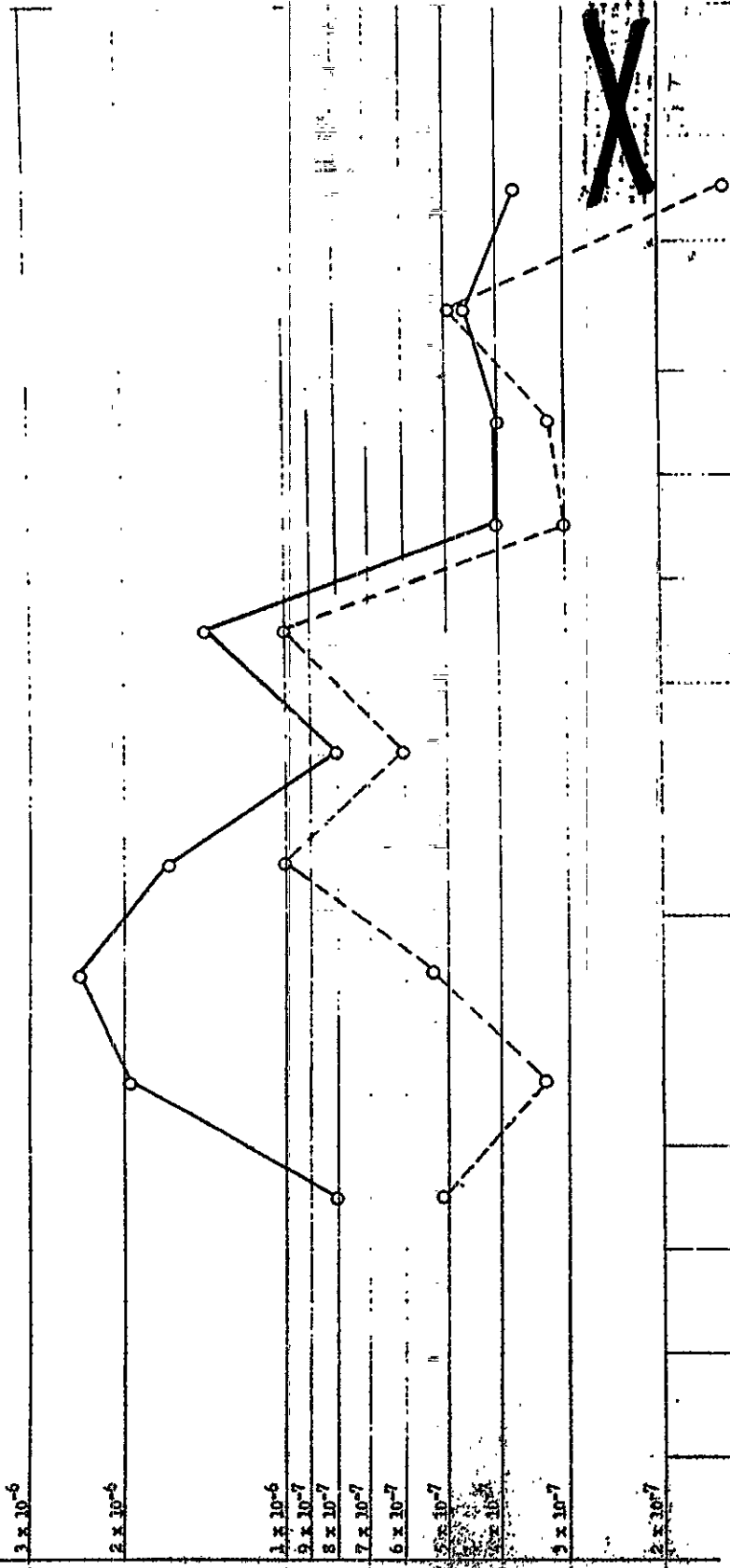
1946



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MAXIMUM EIGHT HOUR DOSEAGES
AS RECEIVED ON C. I. UNIT
AS NO 101 PER LITER
FOR YEAR 1946

○---○ BENTON CITY 614 SLUG
○—○ 209 1/2 614 SLUG



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