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USE OF DEPLETED MATERIALS AS FEED

BOX # 818

STEP	FEED Source	FEED Amt. Available Kg T	FEED Conc. (Avg)	FEED Rate Kg T/day	DAYS	PRODUCT Conc.	PRODUCT Rate Kg X/day	PRODUCT Total Kg X	PRODUCT Cost dollars/gm	WASTE Conc.
1	S-50 Waste	76,850	33067.2	2500	30.7	412500	2.97	89.5	39.35	23055.0
2	K-25 Waste plus waste from Step 1	200,840	33055.0	3600	55.8	"	2.49	139.0	46.85	23048.0
3	K-27 Waste plus waste from Step 2	775,920	33048.7	3600	215.9	"	2.19	473.0	53.40	23042.6
4	Waste from Step 3	775,415	33042.6	3600	215.5	"	1.90	410.5	61.50	23037.1
5	Waste from Step 4	775,005	33037.1	3600	215.2	"	1.64	354.0	71.20	23032.1
6	Waste from Step 5	774,650	33032.1	3600	215.0	"	1.40	301.8	83.45	23028.0
7	Waste from Step 6	774,350	33028.0	3600	214.9	"	1.18	253.7	98.90	23024.0
1	S-50 Waste	76,850	33067.2	3000	25.6	46000	3.75	96.0	31.20	23055.0
2	K-25 Waste plus waste from Step 1	200,835	33055.0	3600	55.8	"	3.05	170.2	38.30	23046.6
3	K-27 Waste plus waste from Step 2	775,890	33048.4	3600	215.9	"	2.67	567.5	43.70	23041.0
4	Waste from Step 3	775,310	33041.0	3600	215.3	"	2.26	487.5	51.65	23034.8
5	Waste from Step 4	774,820	33034.8	3600	215.1	"	1.88	405.5	62.20	23029.6
6	Waste from Step 5	774,415	33029.6	3600	214.9	"	1.58	340.0	73.90	23025.4

PERTINENT ASSUMPTIONS

1. The date as to amounts and concentrations of depleted materials on hand are values estimated for Nov. 5, 1946 based on the amounts on hand on Oct. 21, 1946. The following materials were on hand on October 21, 1946:

Material	Kg T	Avg. Conc.
S-50 Waste	76,850	33067.2
K-25 Waste	143,580	33055.1
K-27 Waste	536,220	33048.8

DECLASSIFICATION RECOMMENDED
GABRIEL MARCIANTE, ORO CLASSIFICATION OFFICER
Name (ADC) - Organization
4/17/96
Date

DECLASSIFICATION AUTHORIZED
George Sholming ORO
NAME (ADD) - ORGANIZATION
4/26/96
DATE

RESTRICTED DATA
This document [illegible] Restricted Data as defined [illegible] the Atomic [illegible] Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions.

2. Unit cost figures are based on an assumed fixed cost of $3,500,000 per month.
3. The maximum feed rate with present facilities is assumed to be 3600 Kg T/day.
4. The feed rate in "Step 1" is determined so that the resulting waste has about the same concentration as old K-25 Waste.
5. Product and waste values apply to steady-state operation with the feed material listed. No allowances are made for the variations to be expected during the transition from one step to the succeeding one.

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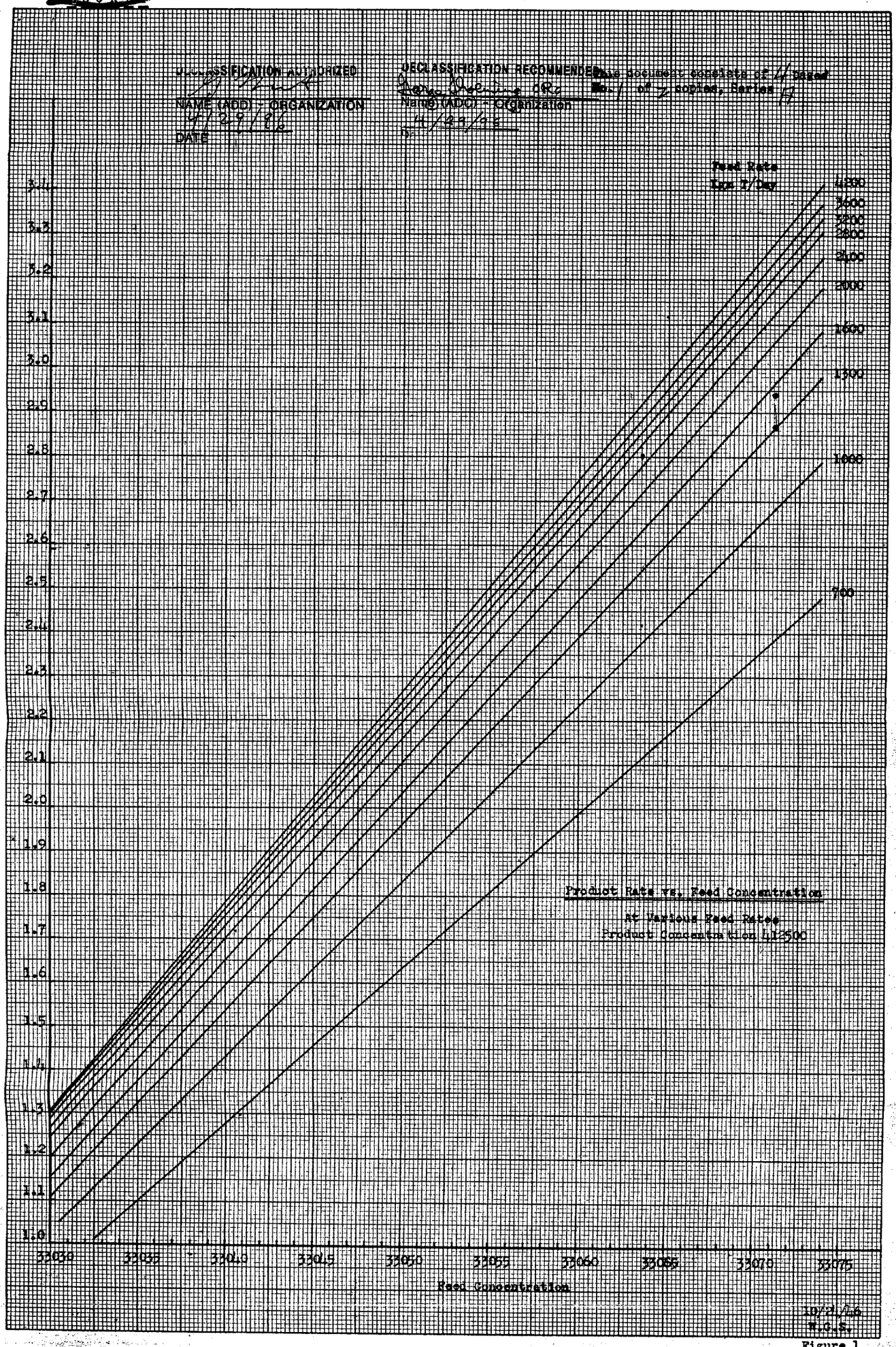

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R.C.S.

Figure 1

Restricted Data
as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions

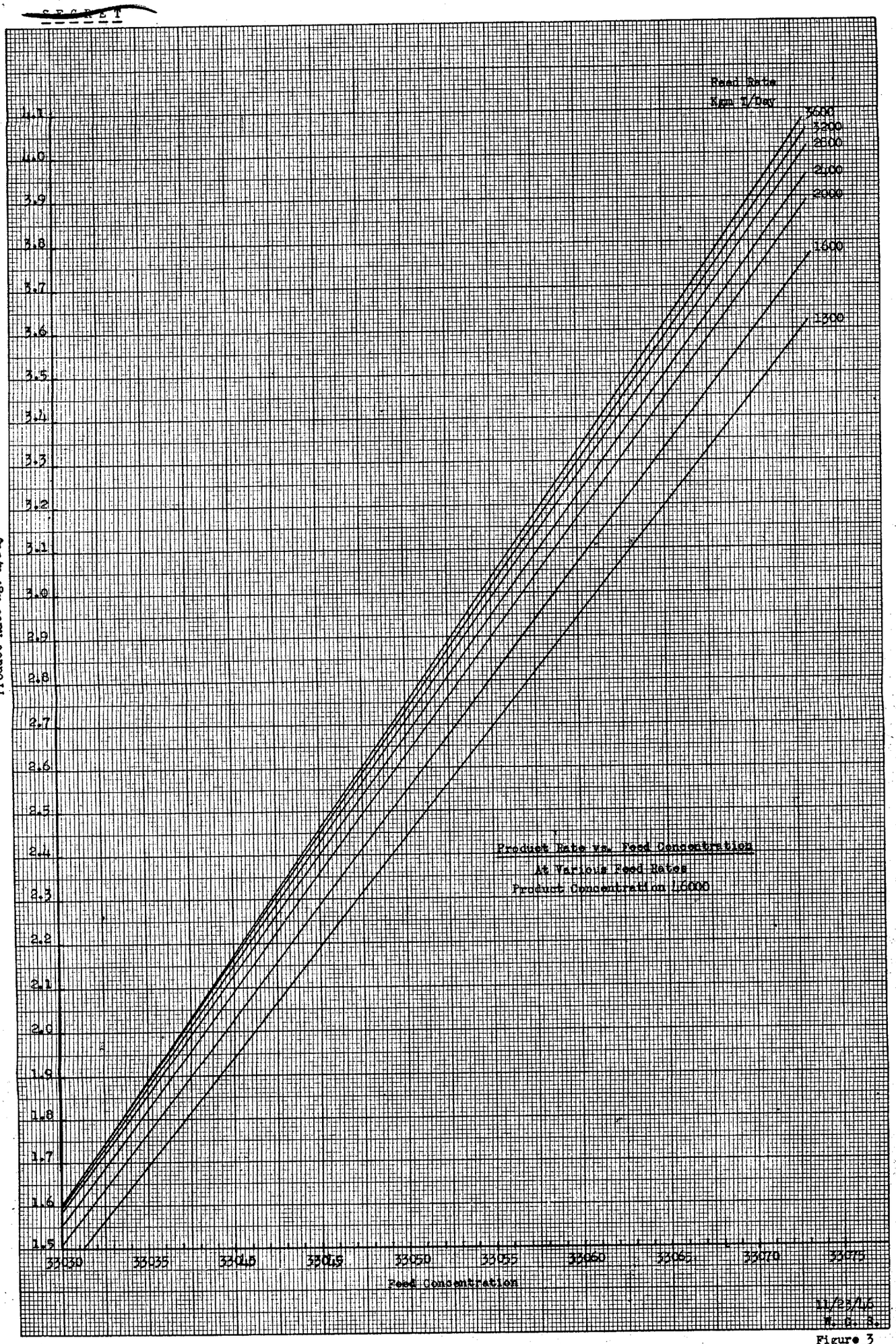

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Figure 3

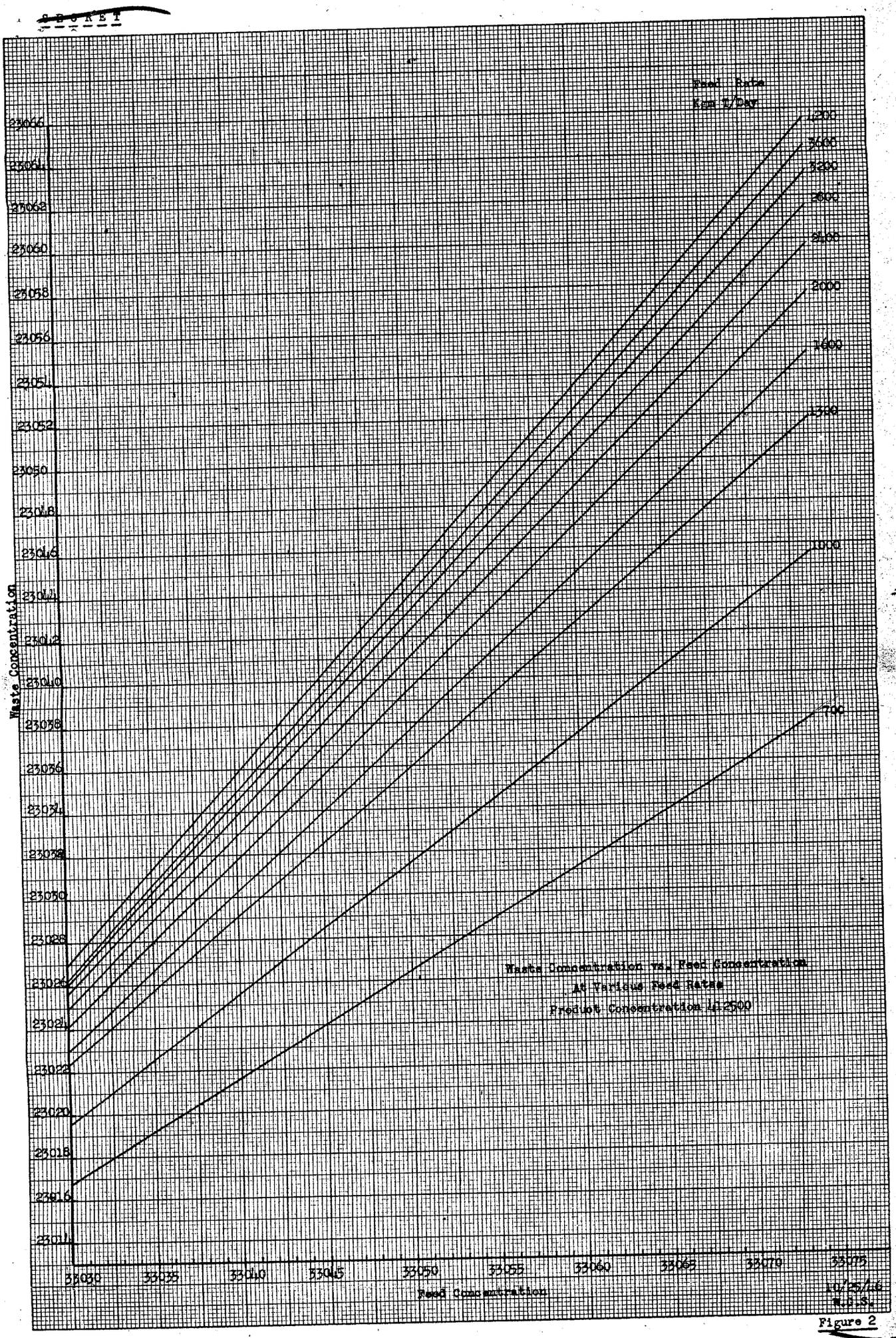
Feed Rate
Kgm U/Day
4200
3600
3200
2600
2400
2000
1600
1300
1000
700
Waste Concentration
23066
23064
23062
23060
23058
23056
23054
23052
23050
23048
23046
23044
23042
23040
23038
23036
23034
23032
23030
23028
23026
23024
23022
23020
23018
23016
23014
33030
33035
33040
33045
33050
33055
33060
33065
33070
33075
Feed Concentration
Waste Concentration vs. Feed Concentration
At Various Feed Rates
Product Concentration 44,2500
10/25/46
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Figure 2

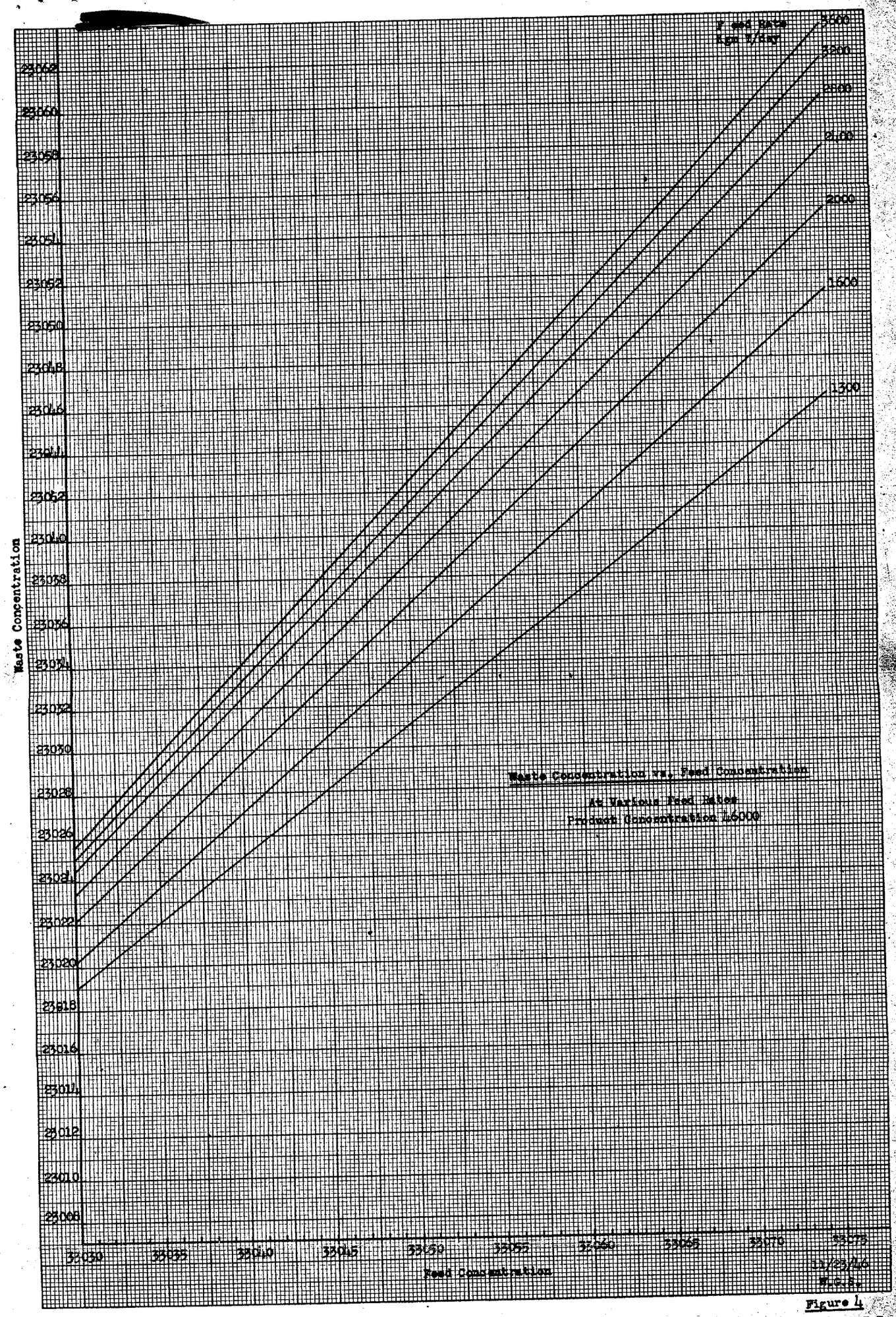
Feed Rate
Kgm T/day
3600
3200
2800
2400
2000
1600
1200
Waste Concentration
23062
23060
23058
23056
23054
23052
23050
23048
23046
23044
23042
23040
23038
23036
23034
23032
23030
23028
23026
23024
23022
23020
23018
23016
23014
23012
23010
23008
33030
33035
33040
33045
33050
33055
33060
33065
33070
33075
Feed Concentration
Waste Concentration vs. Feed Concentration
At Various Feed Rates
Product Concentration 46000
11/23/46
W.C.S.

Figure 4