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GEOPHOTO MINERALS REPORT 1970/2

SUMMARY

DIGITAL GEOPHYSICAL AND GEOCHEMICAL

DATA SHEETS AT 1:100,000 SCALE

E.L.6/68, N.E. TASMANIA

MICROFILMED

TEXINS DEVELOPMENT PTY. LTD.

INTRODUCTION

This report presents digital gamma ray spectrometer data for Bi^{214} , Tl^{208} , K^{40} and $\frac{\text{Bi}^{214}}{\text{Tl}^{208}}$ and digitized drainage geochemical data for Cu, Pb, Zn, Mo and Tl^{208} Cu/Mo ratios. Sheets at 1:100,000 scale are enclosed. Larger scale sheets of airborne geophysical data are available, but for ease of reference to the whole permit area, the 1:100,000 sheets are most suitable.

Robertson
Submitted

GAMMA RAY SPECTROMETER DATA1. Uranium Occurrence

The data have been examined by B. Sealy with respect to possible uranium occurrence, and his comments are attached (Appendix I).

The subeconomic uranium occurrences at Anchor respond significantly to the system (Anomaly C) on the Bi^{214} maps so that other anomalies considered significant may warrant more detailed follow-up (for base metals as well as uranium) than has been given of this date.

2. Lithologic

The system is a fairly sensitive lithologic indicator when data is closely examined. Contours tend to smear detail of some features and profiles would be better for intensive analysis. However, with experience, the lithologic features are readily recognisable on the contour maps, and in this respect Tl^{208} is an exceptionally fine indicator as can be observed near Derby by overlaying the geology. Tin granite, porphyritic granite, mathinna group

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Cainozoic sediments draining granite throughout show high spots suggesting some deposition of uranium derived from granitic sources. It is not expected that these would be economic.

3. Base Metals

The "mineralizing" acid granite of the region responds quite well to the system. The reasons for the distribution of major economic and non-economic leads of the Old Ringarooma system is self-evident when their array is considered in relation to distribution of broad Bi²¹⁴ and K⁴⁰ anomalies (indicating tin granite) in the poorly mapped granitic areas near Derby and Mussel Roe.

Small mineralizing plutons intruding Mathinna Group sediments and porphyritic granite do respond quite well to Bi²¹⁴ and K⁴⁰ detection as evident at Constable's Creek and on the Blue Tier. Other anomalous areas inland from Scamander and near granite contacts should be closely followed up.

Digitized Drainage Data

These sheets suffer from some mechanical positioning errors occasioned in plotting, and some smearing and exaggeration and gradient effects caused by the programmes used. However, the general purpose of digitizing was to recognise broad areas that might indicate disseminated or stockwork deposits, and this purpose was served. "Point" sources of possible ore are better sought by inspection of dispersion trains on individual creeks.

J.H. Rattigan

004

GOPHOTO MINERALS REPORT 1970/2
APPENDIX I.

MEMORANDUM REPORT ON
GAMMA RAY SPECTROMETER ANOMALIES
E.L.6/68, NORTH EAST TASMANIA

BY

B.E. SEALY

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Anomaly A

Located in Devonian granite. Significant anomaly on Bi²¹⁴ and K⁴⁰ maps, not developed on Tl²⁰⁸. Not as 'peaked' as originally noted, due to some questionable +700' values.

Anomaly B

Small anomaly developed on Bi²¹⁴ map, not significant on Tl²⁰⁸ or K⁴⁰. Previously named 'Constable's Creek Prospect'. Anomaly is probably caused by small area of Devonian (Dgm) granite surrounded by Sm.

Anomaly C

Anomaly over Anchor Mine, significant on Bi²¹⁴ and K⁴⁰ maps. Not indicated by Tl²⁰⁸ contouring. Uranium mineralisation of sub-economic character has been observed at this locality.

Anomaly E

Questionable anomaly, mainly created by 'dip gradient' in contouring. Located in Dgm. Only developed on Bi²¹⁴ map.

Anomaly I & J

Questionable anomalies occurring in Silurian quartzites and slates (Sm). Developed on all three maps (Bi²¹⁴, Tl²⁰⁸ and K⁴⁰) investigated. Peak values located between flight lines.

Anomaly N

Anomalous area on Tl²⁰⁸ and K⁴⁰ maps. Believed due to granite outcrop contrasting with Sm and Tertiary basalt (Tb) to the west and south respectively.

Anomaly O

Significant anomaly, developed on Bi²¹⁴ and Tl²⁰⁸ maps as small symmetrical feature. On the K⁴⁰ map it is shown as part of a large east-central area believed related to the Devonian Granite (Dgm). The anomaly occurs along the Dgm - Sm contact.

Anomaly P

Small anomaly in Dgm, shown on Tl²⁰⁸ map only.

Anomaly T

Broad anomaly overlying outcrop of Devonian acid (tin) granite. Developed on the Bi²¹⁴ and K⁴⁰ maps. Probably related to lithologic change.

Anomaly U

Lenticular east-west trending anomaly in Sm. Feature developed on Bi²¹⁴ map, not significant on Tl²⁰⁸ or K⁴⁰ maps.

Anomaly W

Small anomaly shown on Bi²¹⁴ map in Silurian quartzites and slates (Sm).

Anomaly X

Small anomaly in the same area as I and J above. Shown on Bi²¹⁴ map as occurring in Sm. Questionable due to flight line control only to west, blank area in east.

Anomaly Y and Z

Anomalies shown on Tl²⁰⁸ map as occurring in Quaternary - Tertiary sediments. (Q - Td.).

Besides small anomalies, a large area of high-value contours occurs in the western 'insert' which is related to outcropping Devonian granite (Dgm). The feature generally follows the outline of the granite contact. On the Bi²¹⁴ map a zone of smaller values occurs in the drainage basin of Main Creek (marked "R"). This anomalous zone could be related to Uranium leaching and reprecipitation.

A second large area of positive contours occurs in the north. This is also related to granite outcrops. Just to the south occurs feature "S". This feature is part of the large "mass" on the Bi²¹⁴ map but separated on the K⁴⁰ map. The feature does not appear significant on the Tl²⁰⁸ map.

(c)

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RECOMMENDATIONS AND REVIEW

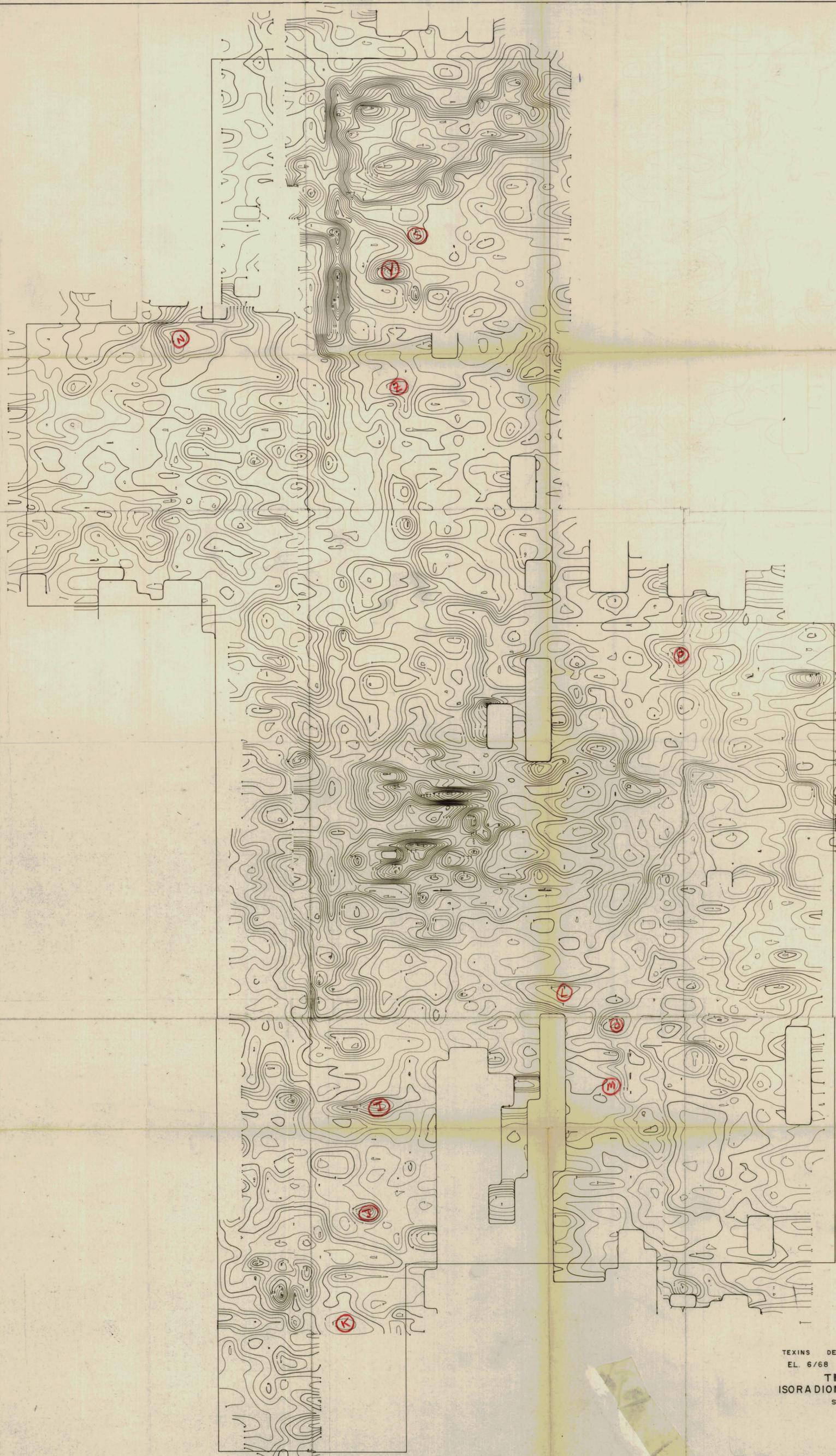
Anomalies A, O and U significant uranium - K anomalies, which bear further investigation. Anomaly C, significant uranium anomaly caused by Anchor Mine. Anomalies B, S, T and W - less significant Uranium anomalies which should be investigated after the most significant have been covered. Anomalies E and X - questionable uranium anomalies, may be due to computer contouring. Anomalies I and J - questionable uranium and thorium anomalies, may be created by computer contouring. Anomaly N - thorium and potassium anomaly, may be related to lithologic change. Anomalies P, Y and Z - thorium anomalies worth surface investigation.

B. Sealy.

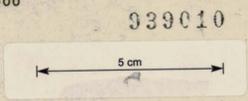
(d)

ENCLOSURES

- A. Isoradiometric Contour Map for Tl^{208} x 2
- B. Isoradiometric Contour Map for Bi^{214} x 2
- C. Isoradiometric Contour Map for K^{40} x 2
- D. Isoradiometric Map for Bi^{214}/Tl^{208} x 2
- E. Digitized Drainage Geochemistry for Pb. x 2
- F. Digitized Drainage Geochemistry for Zn. x 2
- G. Digitized Drainage Geochemistry for Cu. x 2
- H. Digitized Drainage Geochemistry for Mo. x 2
- I. Digitized Drainage Geochemistry for Cu/Mo.
- J. Geology Overlay
- K. Drainage Geeveston Ag
- L. Drainage Geeveston Bi
- M. Drainage Geeveston Cu/Pb
- N. Drainage Geeveston Zn/Pb
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TEXINS DEVELOPMENT PTY. LTD.
EL. 6/68 N.E. TASMANIA
TI 208
ISORADIOMETRIC CONTOURS
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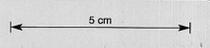


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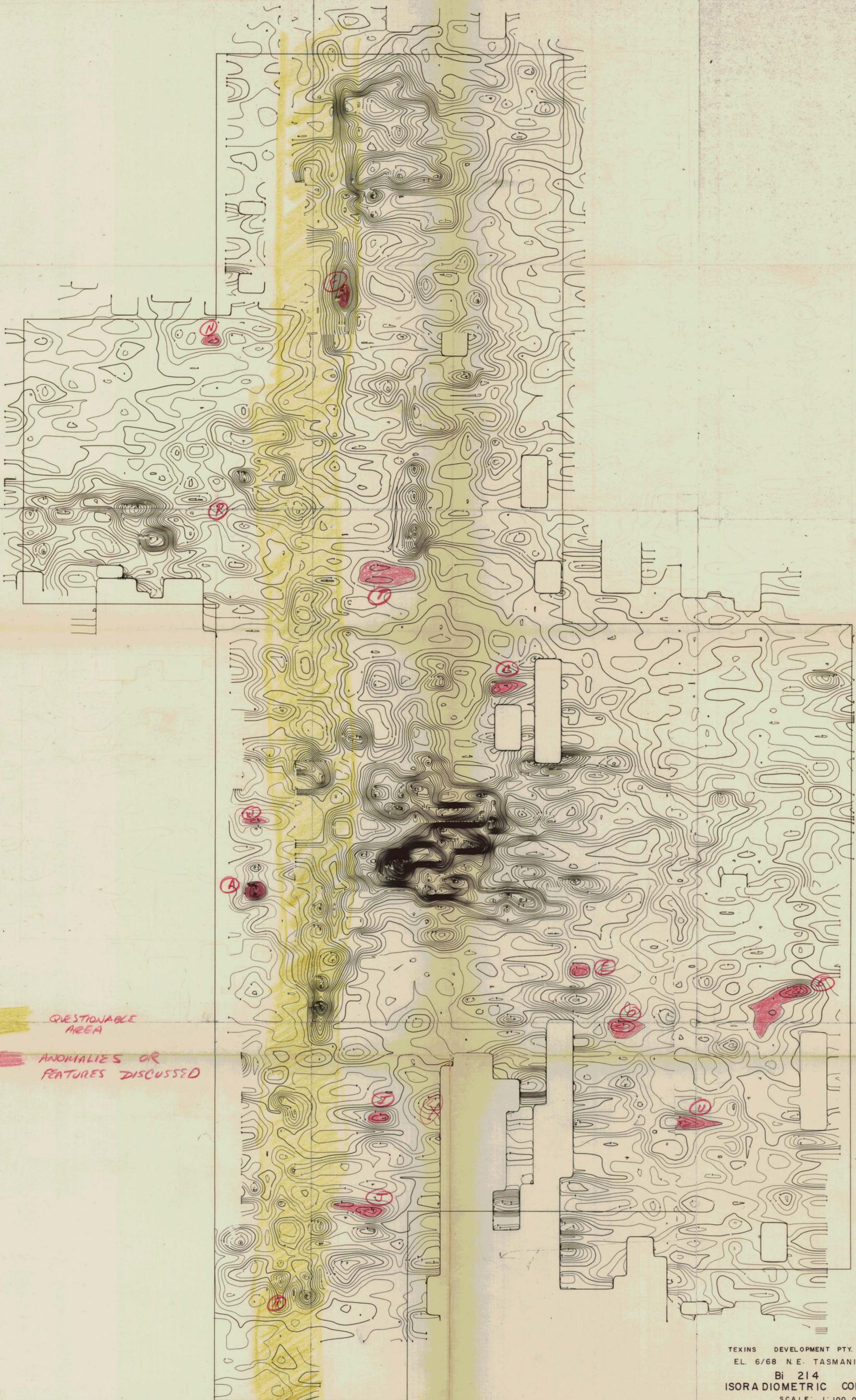
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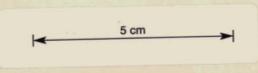
1st SHEET 7 OF 8 SHEETS

1st SHEET 8 OF 8 SHEETS



QUESTIONABLE AREA
ANOMALIES OR FEATURES DISCUSSED

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Bi 214
ISORA DIOMETRIC CONTOURS
SCALE: 1:100,000



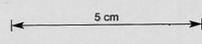
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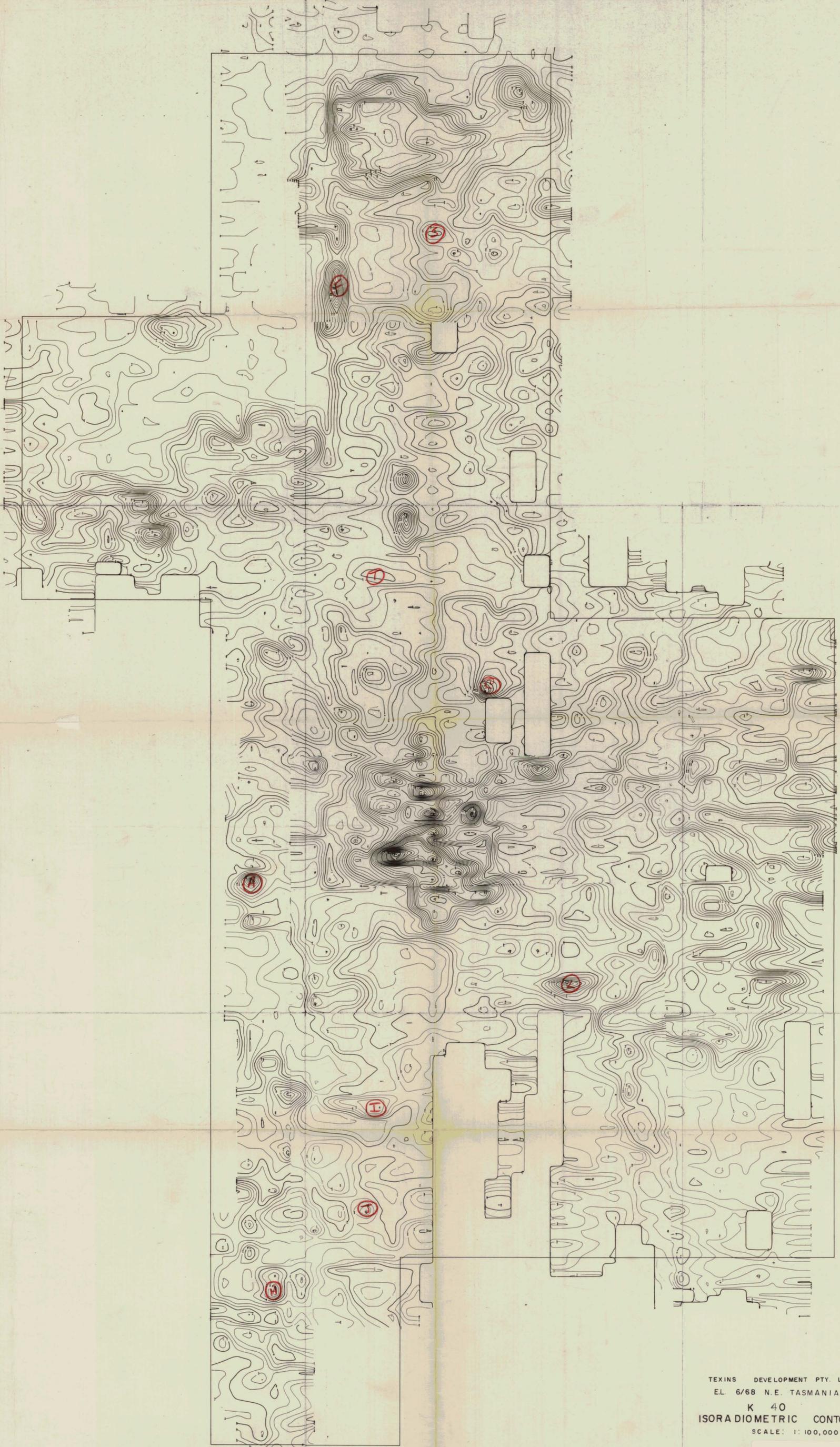
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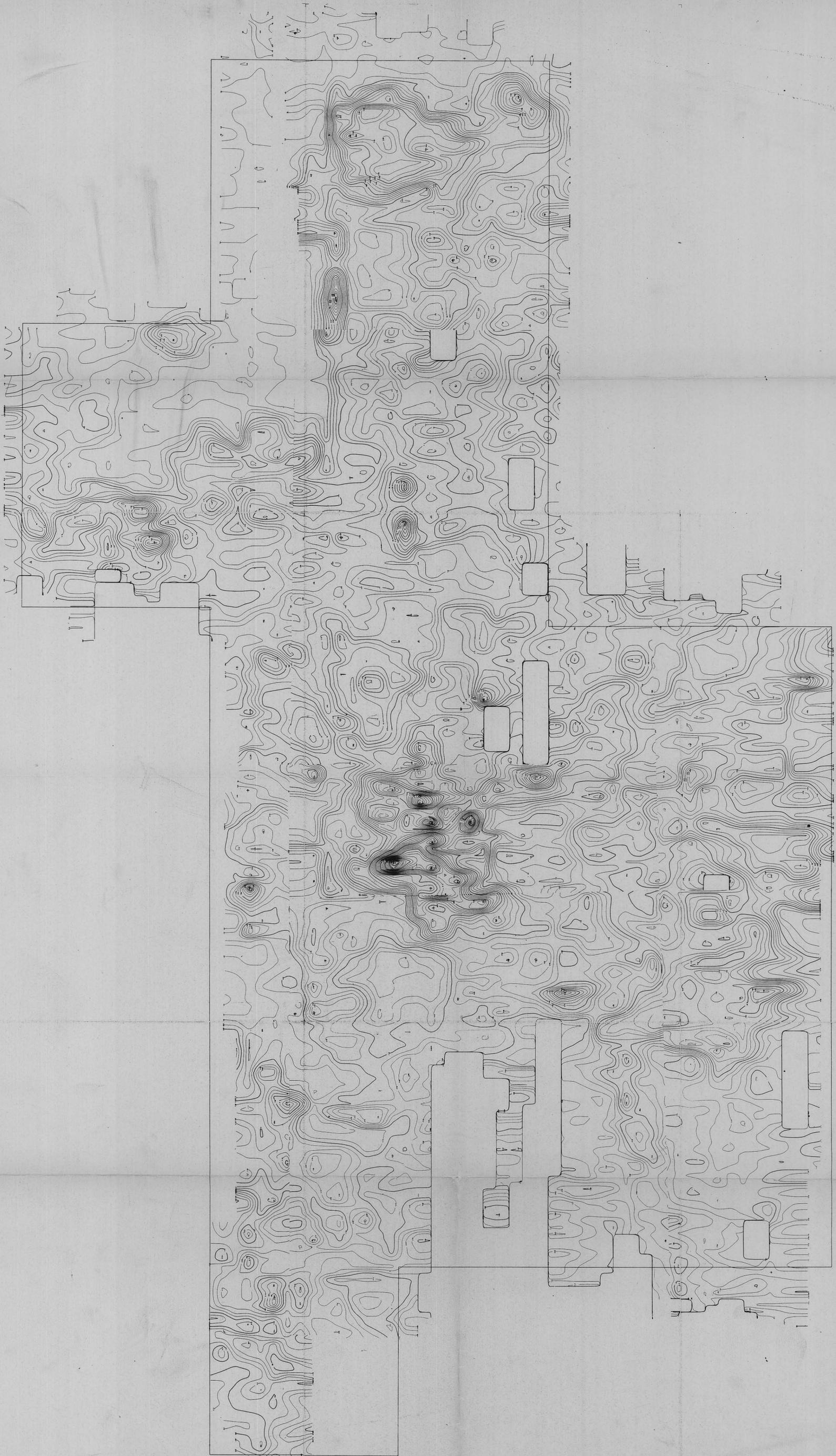
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K 40
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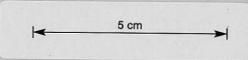
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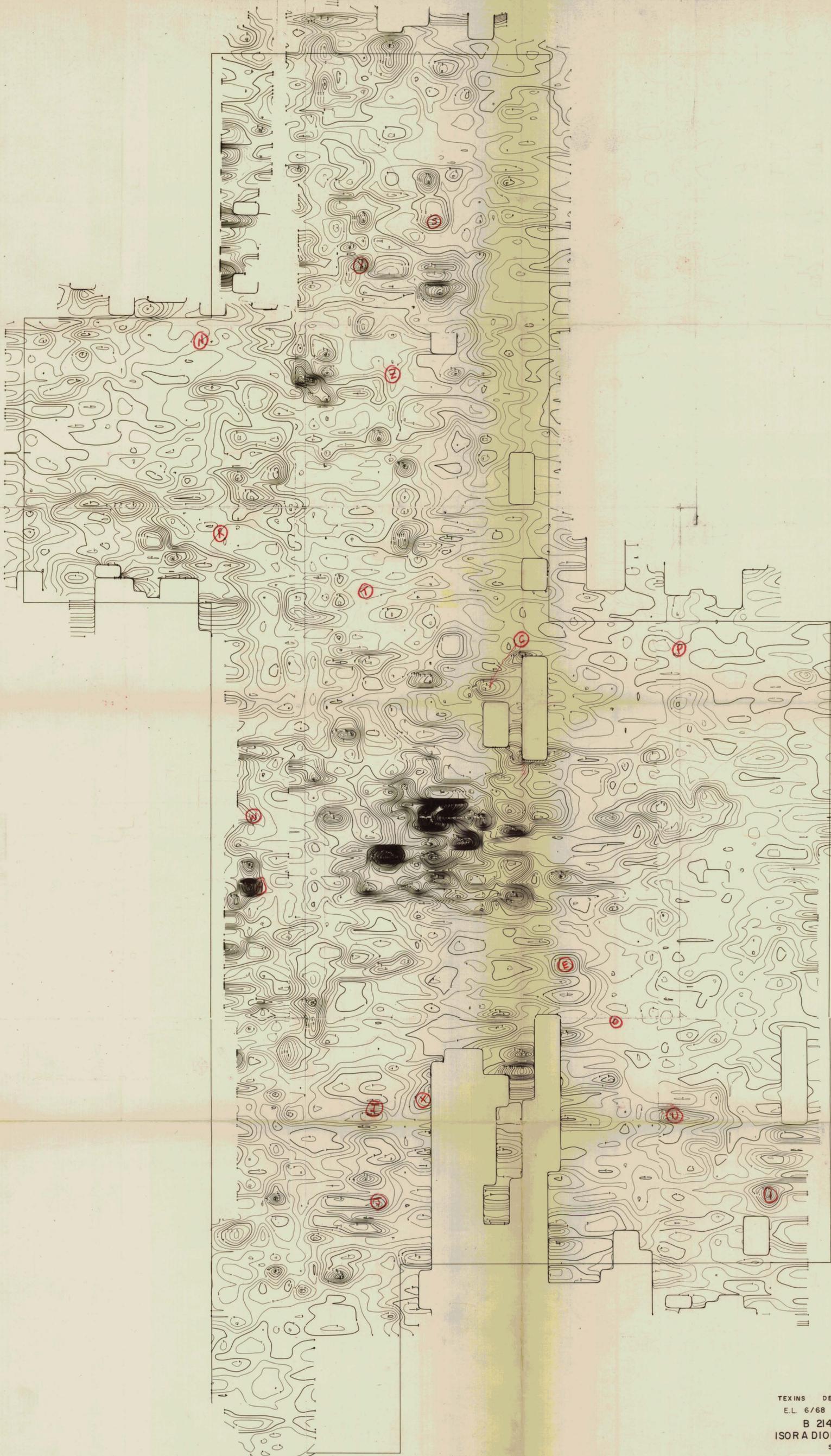
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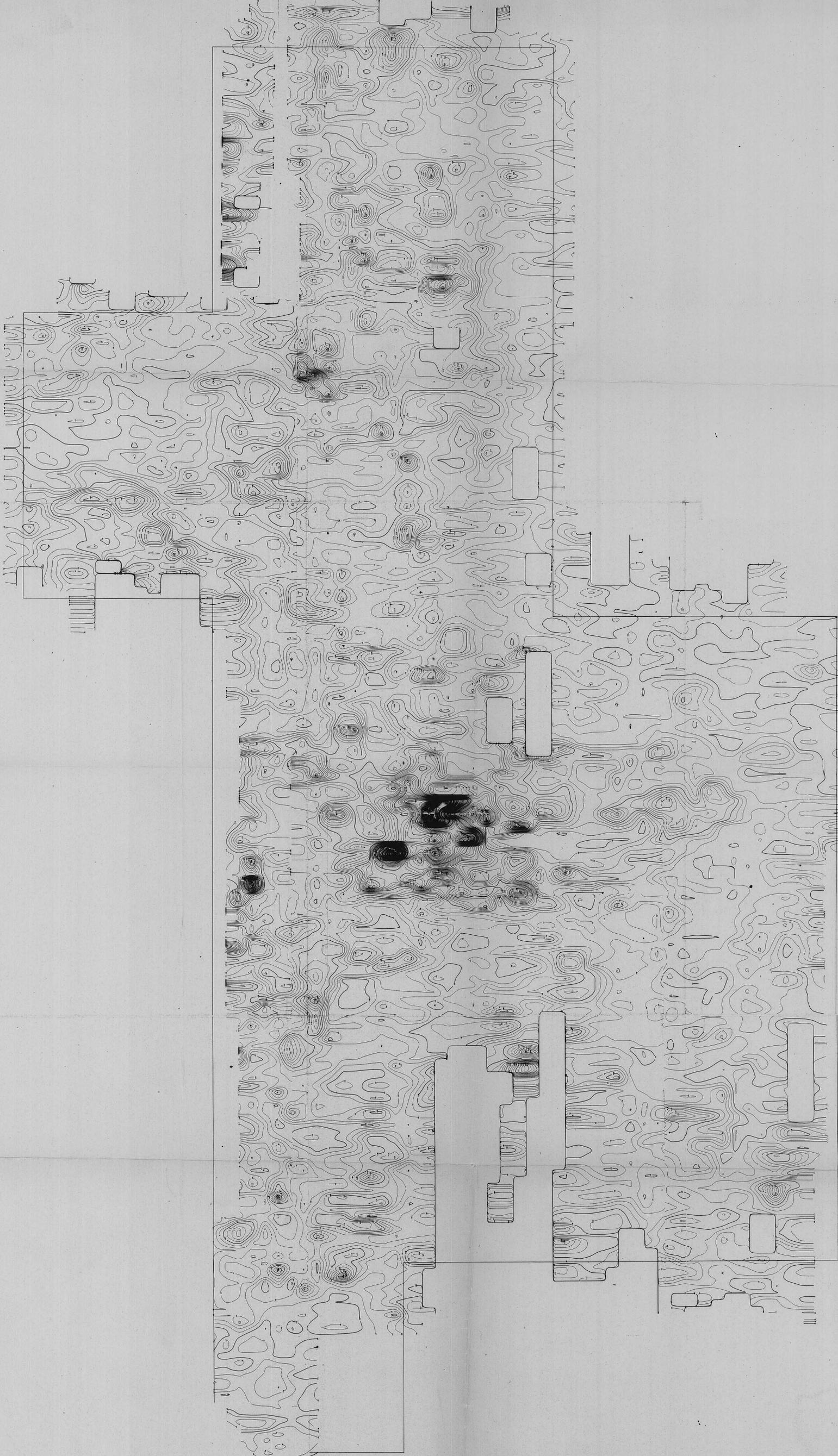


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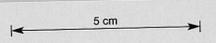
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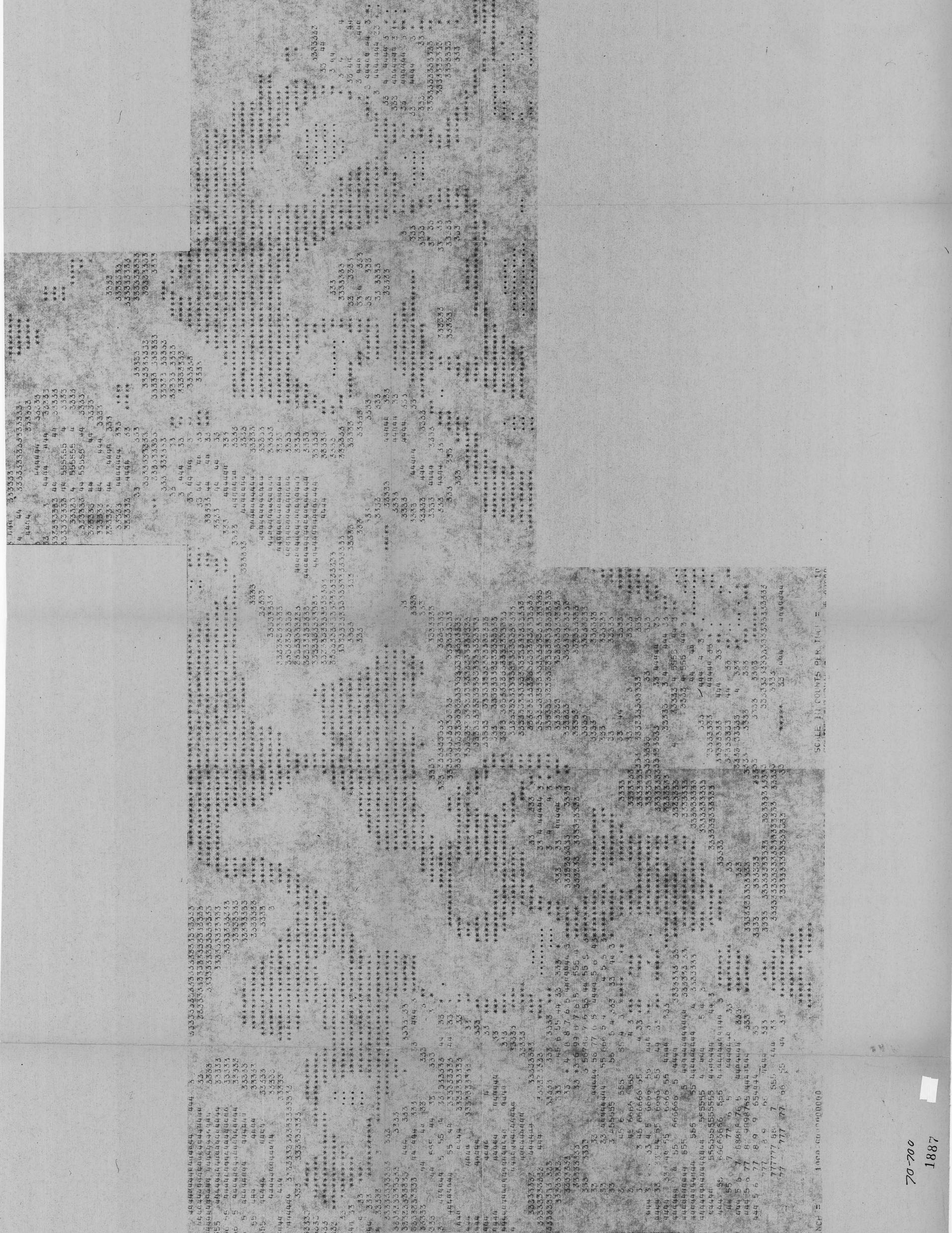


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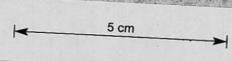




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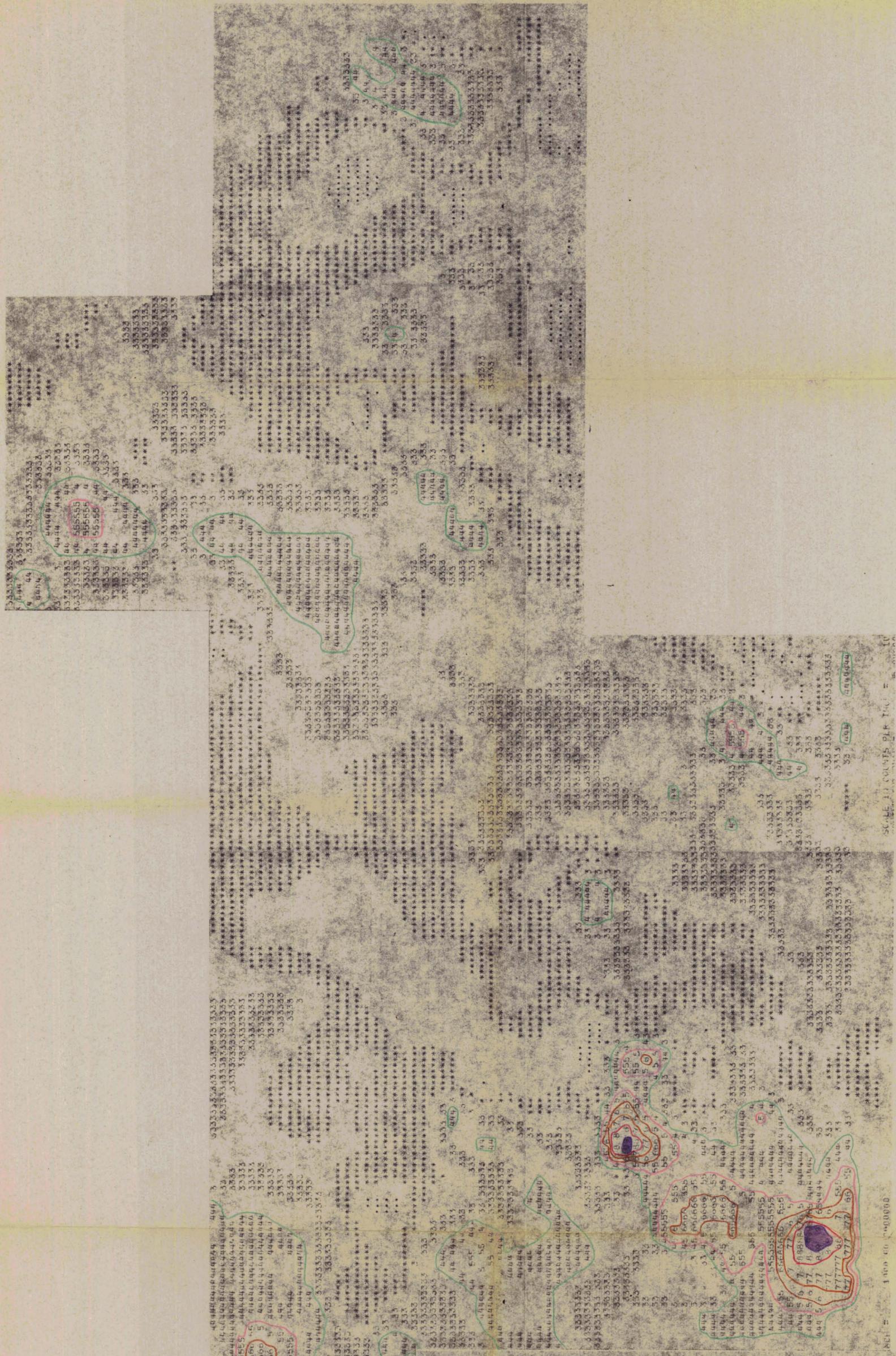


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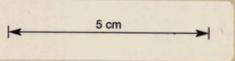
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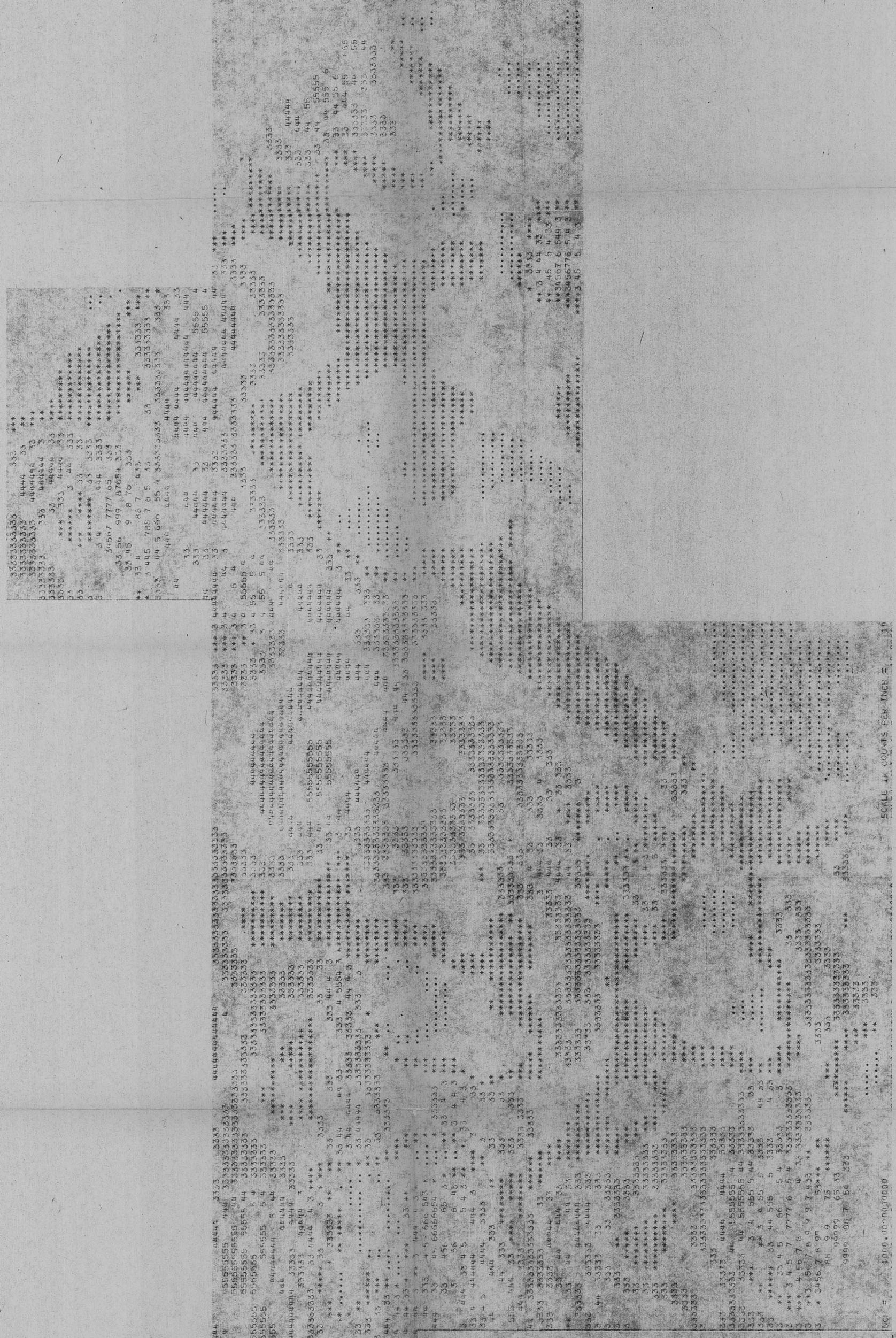


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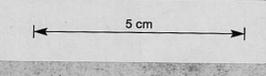
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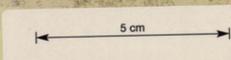
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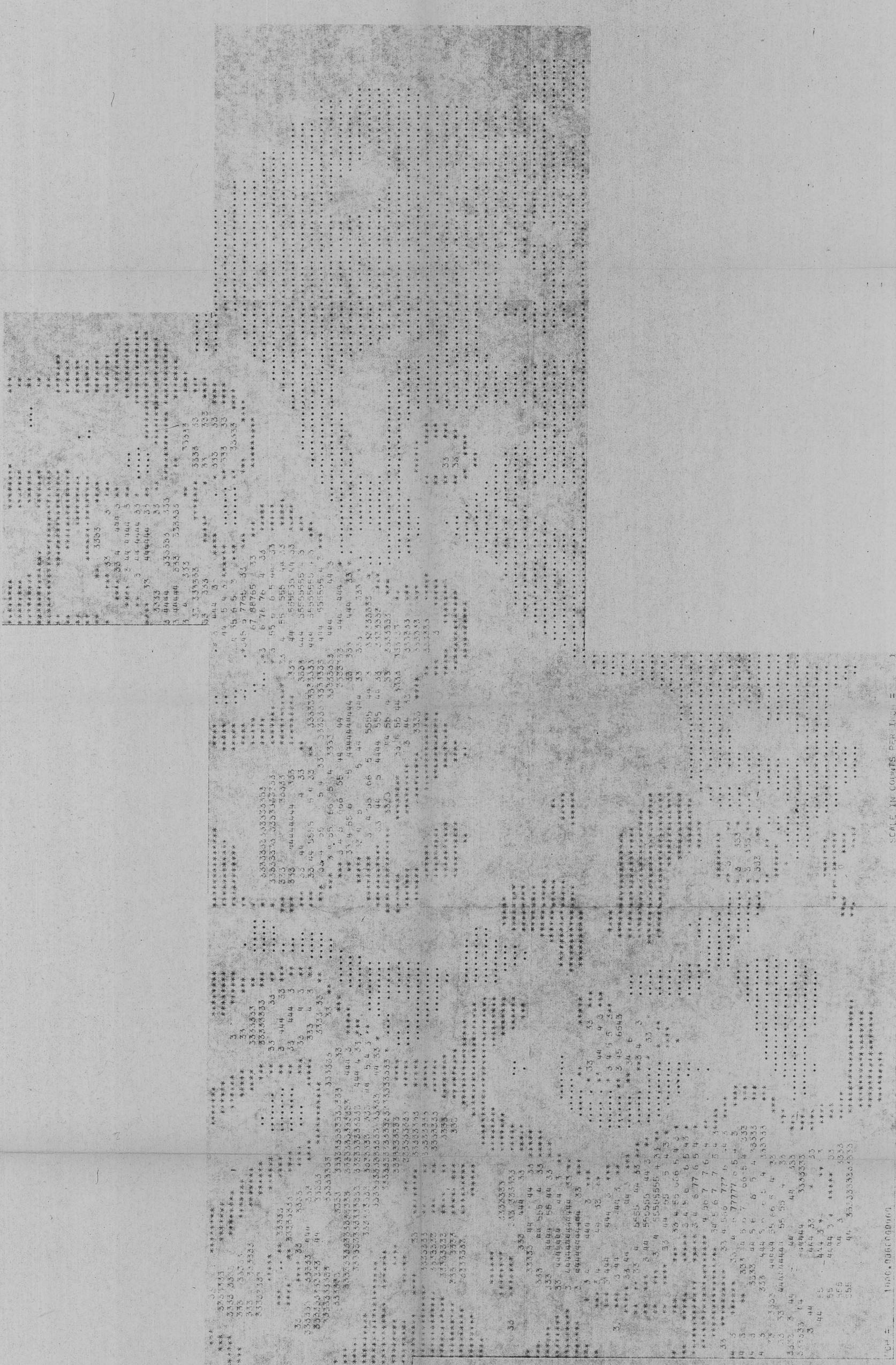
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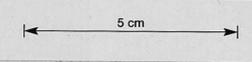
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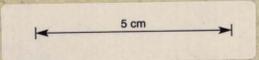
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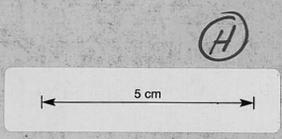


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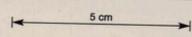
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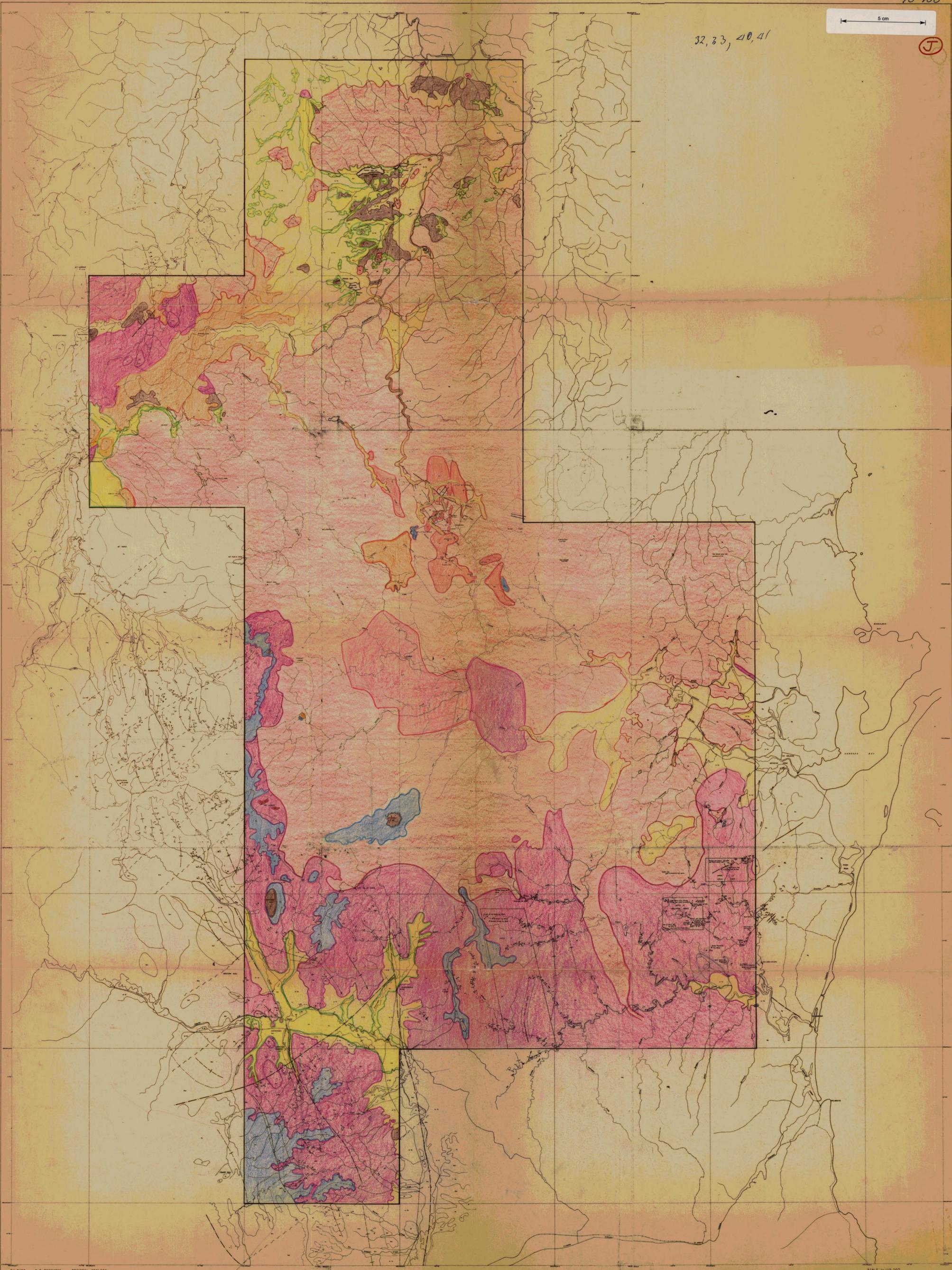


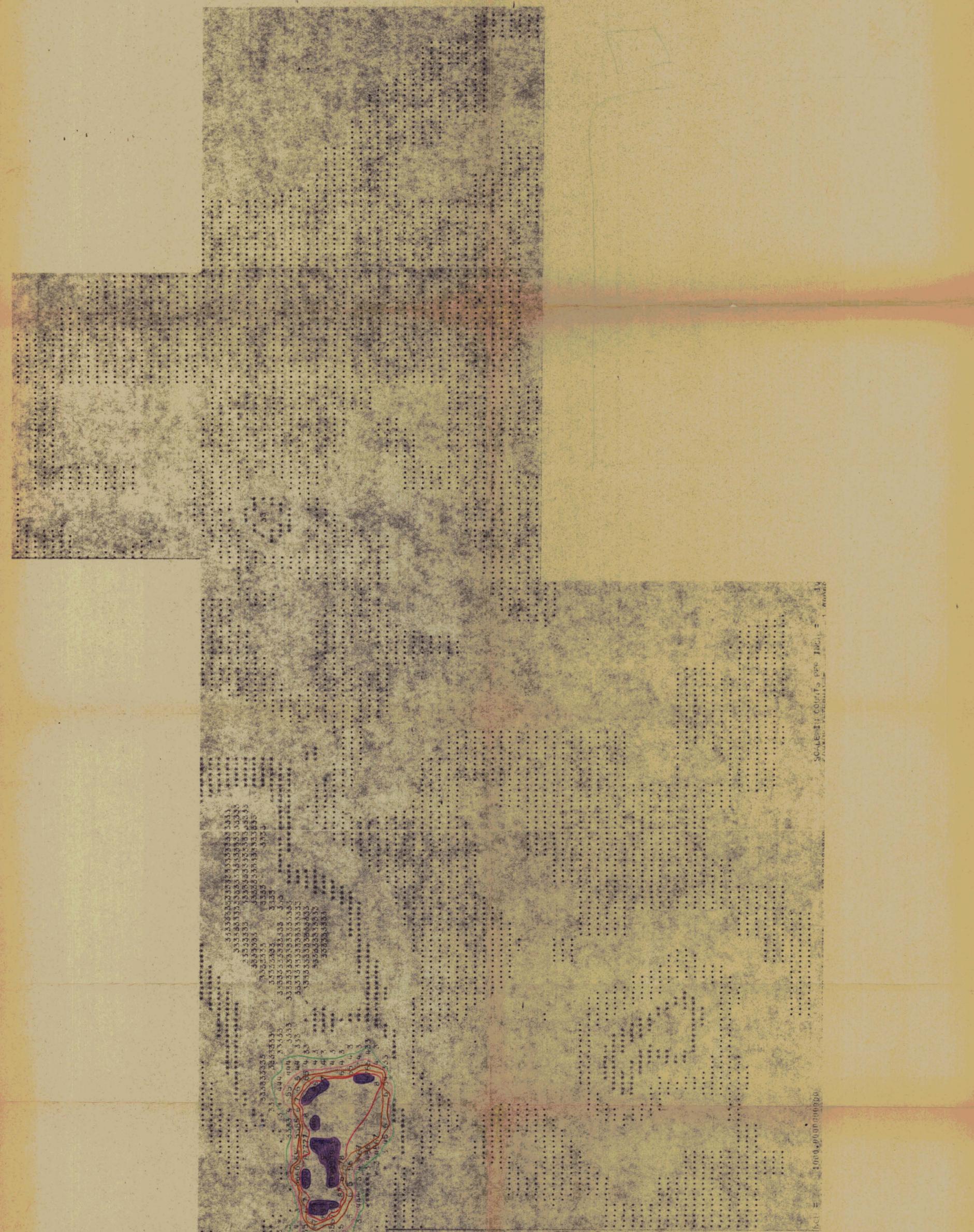
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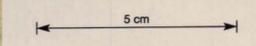
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Ag

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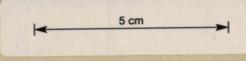
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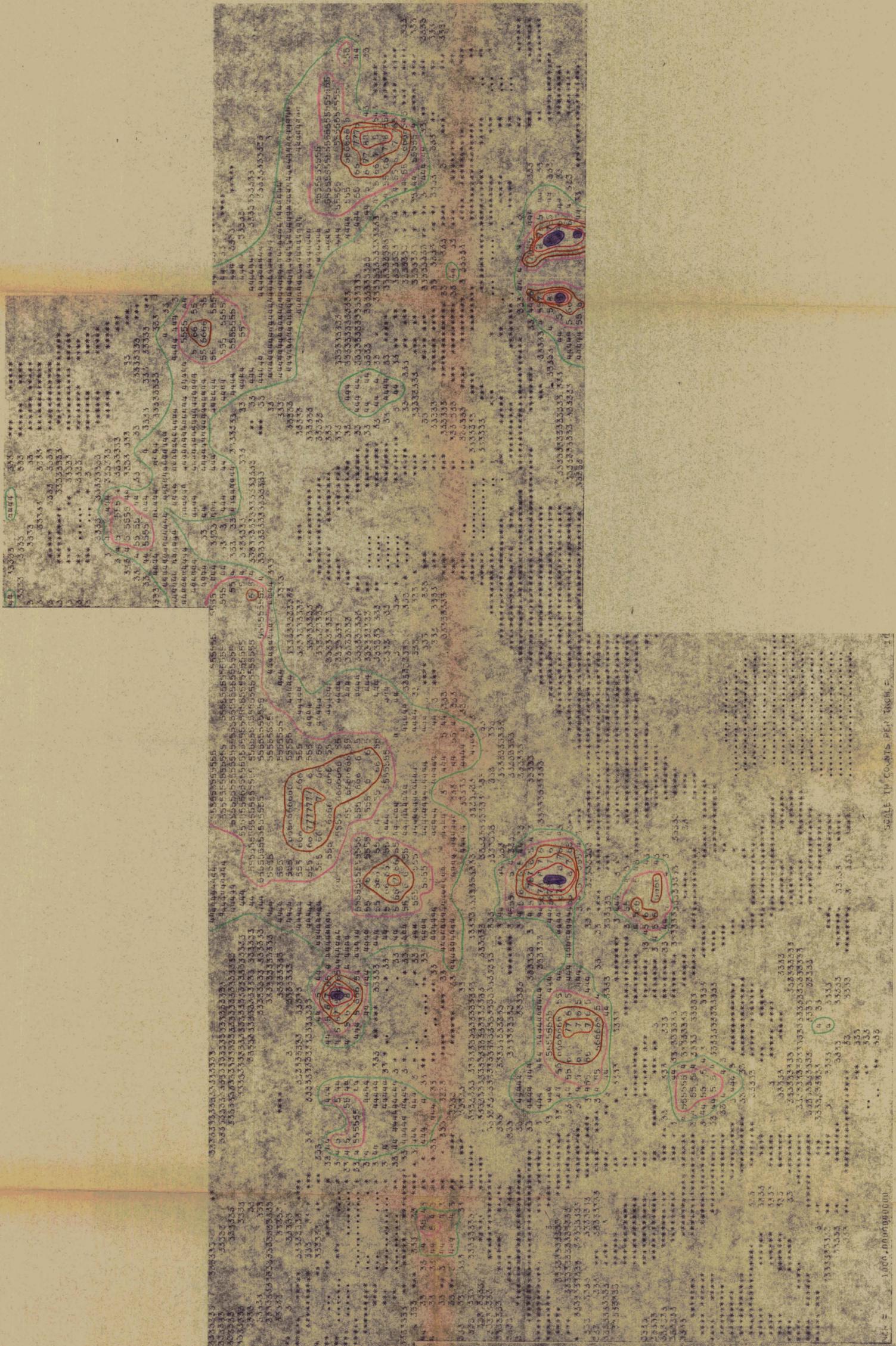
MASALIA AREA GEOCHEMISTRY - Cu/Pb
Scale 1:100,000

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RANGE OF SYMBOL	2.00000000	TO	2.50000000
RANGE OF SYMBOL	3.00000000	TO	3.50000000
RANGE OF SYMBOL	4.00000000	TO	4.50000000
RANGE OF SYMBOL	5.00000000	TO	5.50000000
RANGE OF SYMBOL	6.00000000	TO	6.50000000
RANGE OF SYMBOL	7.00000000	TO	7.50000000
RANGE OF SYMBOL	8.00000000	TO	8.50000000
RANGE OF SYMBOL	9.00000000	TO	9.50000000

Cu/Pb

(M)



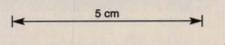


939031

TASMANIA AREA GEOCHEMISTRY - Zn/Pb
Scale 1:100,000

SCALE IN COUNTS PER INCH =	1000.0000000000	1.0000000000000000	95.000000000000
RANGE OF SYMBOL	0.0000000000 TO	1.0000000000 TO	5.0000000000 TO
RANGE OF SYMBOL	1.0000000000 TO	5.0000000000 TO	15.0000000000 TO
RANGE OF SYMBOL	5.0000000000 TO	15.0000000000 TO	25.0000000000 TO
RANGE OF SYMBOL	15.0000000000 TO	25.0000000000 TO	35.0000000000 TO
RANGE OF SYMBOL	25.0000000000 TO	35.0000000000 TO	45.0000000000 TO
RANGE OF SYMBOL	35.0000000000 TO	45.0000000000 TO	55.0000000000 TO
RANGE OF SYMBOL	45.0000000000 TO	55.0000000000 TO	65.0000000000 TO
RANGE OF SYMBOL	55.0000000000 TO	65.0000000000 TO	75.0000000000 TO
RANGE OF SYMBOL	65.0000000000 TO	75.0000000000 TO	84.9999999999 TO

Zn/Pb



04/28

70-700
1894