

MONA OFFSHORE WIND PROJECT

Environmental Statement

Volume 7, Annex 3.12: Badger survey technical report (Public)

Document Number: MOCNS-J3303-RPS-10106

Document Reference: F7.3.12

APFP Regulations: 5(2)(a)

February 2024

F01



Image of an offshore wind farm

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Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Review date
F01	Application	RPS	Mona Offshore Wind Ltd	Mona Offshore Wind Ltd	February 2024
Prepared by:			Prepared for:		
RPS			Mona Offshore Wind Ltd.		

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Glossary

Term	Meaning
Clan	A mixed-sex social group of badgers
Expert Working Group (EWG)	Expert working groups set up with relevant stakeholders as part of the Evidence Plan process.
Sett	Any structure or place that displays signs indicating current use by a badger

Acronyms

Acronym	Description
Defra	Department for the Environment, Food & Rural Affairs
EWG	Expert Working Group
JNCC	Joint Nature Conservation Committee
MAGIC	Multi-Agency Geographic Information for the Countryside
MLWS	Mean Low Water Springs

Units

Unit	Description
km	Kilometres
m	Metres

1 Badger survey technical report

1.1 Introduction

- 1.1.1.1 This document forms Volume 7, Annex 3.12: Badger survey technical report of the Environmental Statement for the Mona Offshore Wind Project.
- 1.1.1.2 This technical report presents the results of the badger *Meles meles* desk study and field surveys undertaken between April and July 2023 and September and October 2023 to inform Volume 3, Chapter 3: Onshore ecology of the Environmental Statement.
- 1.1.1.3 The desk study and field surveys were designed to determine the presence or likely absence of this species.
- 1.1.1.4 Two separate areas have been defined for the purposes of this technical report. These include the 'study area', which describes the geographical extent subject to desk based research, and the 'survey area', which describes the area of land subject to site-specific surveys. The extent of the study area and the survey area were selected to ensure data was collected for the Mona Onshore Development Area and the surroundings that may support this species and may reasonably be affected by the Mona Offshore Wind Project. The extent of the study area and the survey area were discussed and agreed with the onshore ecology Expert Working Group (EWG).
- 1.1.1.5 To protect the welfare of badgers, information pertaining to the location of badgers identified following desk based research and field surveys have been removed. A separate version of this technical report containing confidential data is available upon request to those with a legitimate need to view this information.

1.2 Study area

- 1.2.1.1 The study area comprises the Mona Onshore Development Area, landward of Mean Low Water Springs (MLWS), and a 2 km buffer ('the badger study area'). The location and geographic extent of the badger study area is presented in Figure 1.1 of this technical report.

1.3 Survey area

- 1.3.1.1 Following the commencement of badger surveys, the Mona Onshore Development Area has been refined and now occupies a smaller geographical area. As such, the area of land subject to badger surveys ('the badger survey area') extends beyond the current iteration of the Mona Onshore Development Area. The results from surveys undertaken beyond the Mona Onshore Development Area (i.e. surveys undertaken based on an earlier design iterations) have been included in this technical report because they provide further context regarding the ecological sensitivity of the wider area and to inform Volume 3, Chapter 3: Onshore ecology of the Environmental Statement (where relevant). All the ecological data collected as part of the Environmental Statement for the Mona Offshore Wind Project has been made publicly available through the relevant data records centre.
- 1.3.1.2 Adopting a survey area that is greater in extent than the Mona Onshore Development Area is in accordance with the precautionary approach. It ensures that the Environmental Statement is accurately informed with data from within the Mona Onshore Development Area (i.e. that may be subject to direct impacts) and data from outside the Mona Onshore Development Area (i.e. that may be subject to indirect

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impacts). The location and geographic extent of the badger survey area is presented in Figure 1.1 of this technical report.

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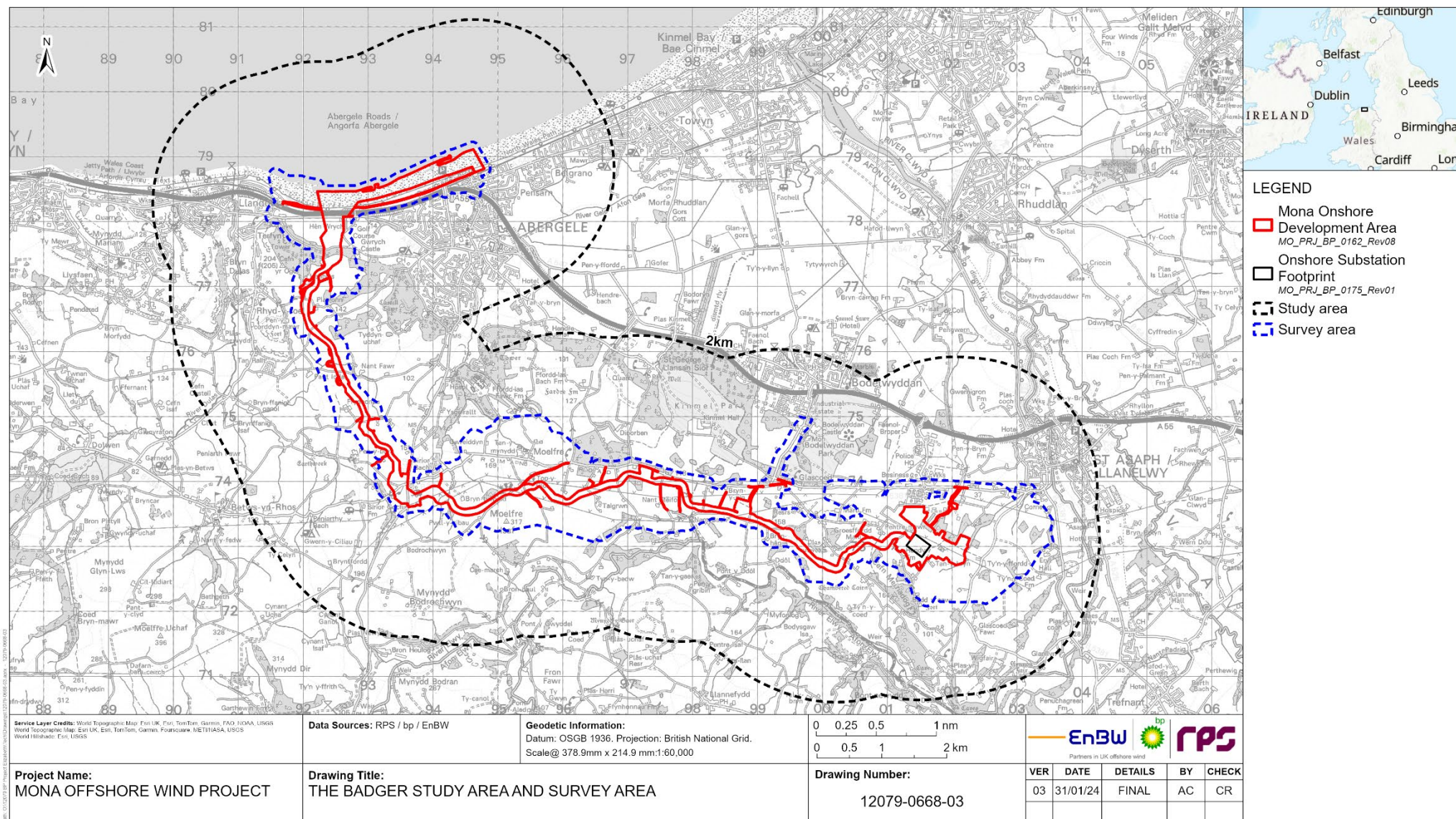


Figure 1.1: The badger study area and survey area.

1.4 Relevant legislation

- 1.4.1.1 Badgers are protected under the Protection of Badgers Act 1992, which makes it an offence to:
- Wilfully kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so
 - Intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access routes.
- 1.4.1.2 The Protection of Badgers Act 1992 defines a sett as “*any structure or place that displays signs indicating current use by a badger*”.

1.5 Consultation

- 1.5.1.1 The scope, methodology and findings of the otter surveys, including those undertaken beyond the current Mona Onshore Development Area, were discussed and agreed with stakeholders via regular Onshore Ecology EWG Meetings. Further detail regarding consultation undertaken with to respect onshore ecology, including otter surveys can be found in Volume 3, Chapter 3: Onshore ecology of the Environmental Statement and the Consultation Report (Document reference: E.3).

1.6 Methodology

- 1.6.1.1 A combination of a desktop study and site-specific surveys were undertaken to establish the likely presence or absence of badgers within the badger study area.
- 1.6.1.2 The results of the onshore ecology desktop study are presented in Volume 7, Annex 3.1: Onshore ecology desk study technical report of the Environmental Statement and summarised in section 1.7.1 below. The results of the field surveys are presented in section 1.7.2 below.

1.6.2 Desktop study

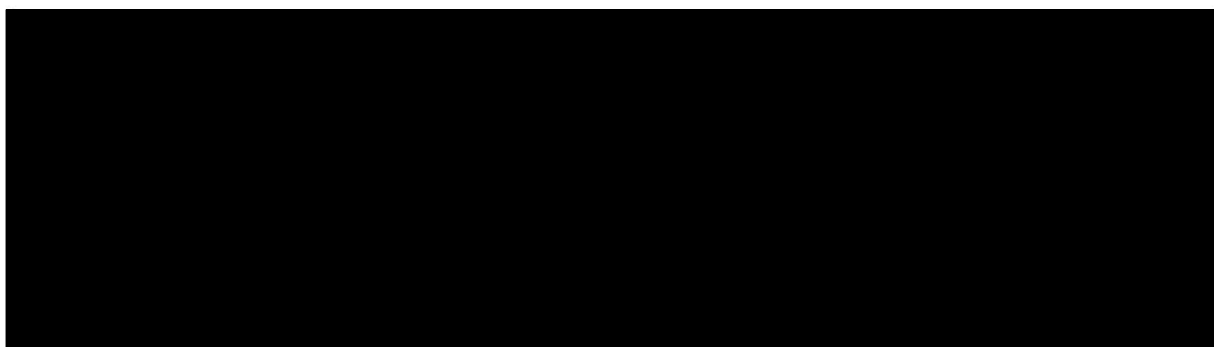
- 1.6.2.1 Information on badgers within the badger study area was collected from existing studies and datasets. These are summarised in Table 1.1 below.

Table 1.1: Summary of key desktop sources.

Title	Source	Year	Author
Historical biological records	Cofnod	2023	Cofnod
DataMapWales	Welsh Government	2023	Welsh Government
Multi-Agency Geographic Information for the Countryside (MAGIC)	Department for the Environment, Food & Rural Affairs (Defra)	2023	Defra
UK Protected Area Joint Nature Conservation Committee (JNCC)	JNCC website	2023	JNCC

1.6.3 Site-specific surveys

1.6.3.1



Badger Surveys

1.6.3.2 All habitat that was considered suitable for badger was subject to a badger survey between April and July 2023 and September and December 2023, where access permitted. A badger survey comprises a single visit with surveyors systematically walking a site looking for setts, latrines, hairs, footprints, runs, and any other signs of badger activity.

1.6.3.3 The identification of setts often provides the most conclusive evidence of badger presence. Any sett recorded was classified against the criteria laid out in the Mammal Societies Surveying Badgers (Harris *et al.*, 1989). The sett classifications are 'main', 'annexe', 'subsidiary' and 'outlying', as detailed in Table 1.2.

Table 1.2: Badger sett classifications.

Sett type	Description
Main sett	Normally the main focal point of a social group of badgers, the main sett is generally consistently occupied and typically has several entrances with spoil piles and associated features indicating regular use including radiating tracks and latrines.
Annex sett	A secondary sett located in the vicinity of the main sett and usually connected by an obvious track. Not necessarily in constant use.
Subsidiary sett	Located further from the main sett than an annex sett and not necessarily connected by a track. Subsidiary setts may be used only seasonally by the social group.
Outlier sett	Used infrequently and can be temporary or used by transient individuals or those excluded from the social group. Outlier setts may be used by other species, such as red fox <i>Vulpes vulpes</i> when not in use by badgers.

1.6.3.4 The level of use for each entrance was classified as either 'active', 'partially active', or 'inactive' as detailed in Table 1.3. The location of any sett entrances found, and the orientation of the entrance holes were also recorded.

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Table 1.3: Level of use of badger sett.

Level of use	Description
Active	A well-used sett entrance in current or regular use. The entrance is clear of debris and may have been recently excavated with associated spoil. Other signs associated with use may also be present such as footprints, hairs, and latrines.
Partially active	Sett entrances are not in regular use, may contain debris, and there may be moss or other plants growing in or around the sett entrance which would usually be removed with frequent use.
Inactive	Sett entrances are clearly not in current use and have not been used for some time. The tunnels may be partially or completely blocked, and the entrance and associated spoil piles may be vegetated.

1.6.3.5 In addition to the location of setts, other field signs for badgers were recorded, as detailed in Table 1.4.

Table 1.4: Description of field signs recorded during badger surveys.

Field sign	Description
Dung pits	The normal method of excretion for badgers is to defecate into a small scrape or pit, which is left uncovered.
Latrines	Collective name for a series of dung pits within an area. These are used by badger social groups to demarcate their territory and may be used for other behavioural purposes. Latrines are therefore an important part of badger social life.
Track	A main arterial route frequently used by badgers, which may be clearly visible over a considerable distance.
Run	A less frequently used route, which may only be visible where it crosses some obstacle, such as a bank, a hedge or a fence. badger hair can sometimes be collected along tracks where they have pushed under barbed wire fences.
Foraging Area	An area which shows signs of foraging activity. Most often occurs as some form of "snuffle holes" and rooting up of turf or ground cover, or overturning of dried cow manure, when in search of earthworms. Other foraging evidence may appear as holes left from digging out wasp or bees' nests, or in arable areas, "rolling" of cereal crops.
Prints	Can be detected where badgers have crossed areas of bare ground and are easily distinguishable from other mammal prints.

1.6.3.6 In accordance with Natural Resources Wales 'A guide for developers' (2023), good working practices in the UK adopt a 30 m buffer around proposed construction sites. 30 m is the distance that activities using heavy machinery, e.g. tracked vehicles, require a licence to legally permit otherwise illegal activities. The buffer therefore acts as a precautionary exclusion zone and protects the land immediately around a sett entrance. This protection is required because the exact direction of the sett tunnels, the tunnel lengths and the location of the badgers' chambers cannot be accurately determined from above ground. In line with the precautionary approach therefore, badger setts are confirmed as being present within the Mona Onshore Development Area and also within 30 m of the Mona Onshore Development Area. This buffer does not affect the badger survey area, which is much greater in extent.

Badger sett monitoring

1.6.3.7

1.6.3.8

1.6.3.9

1.6.4 Limitations

1.6.4.1

1.6.4.2

1.6.4.3

1.7 Results

1.7.1 Desktop Study

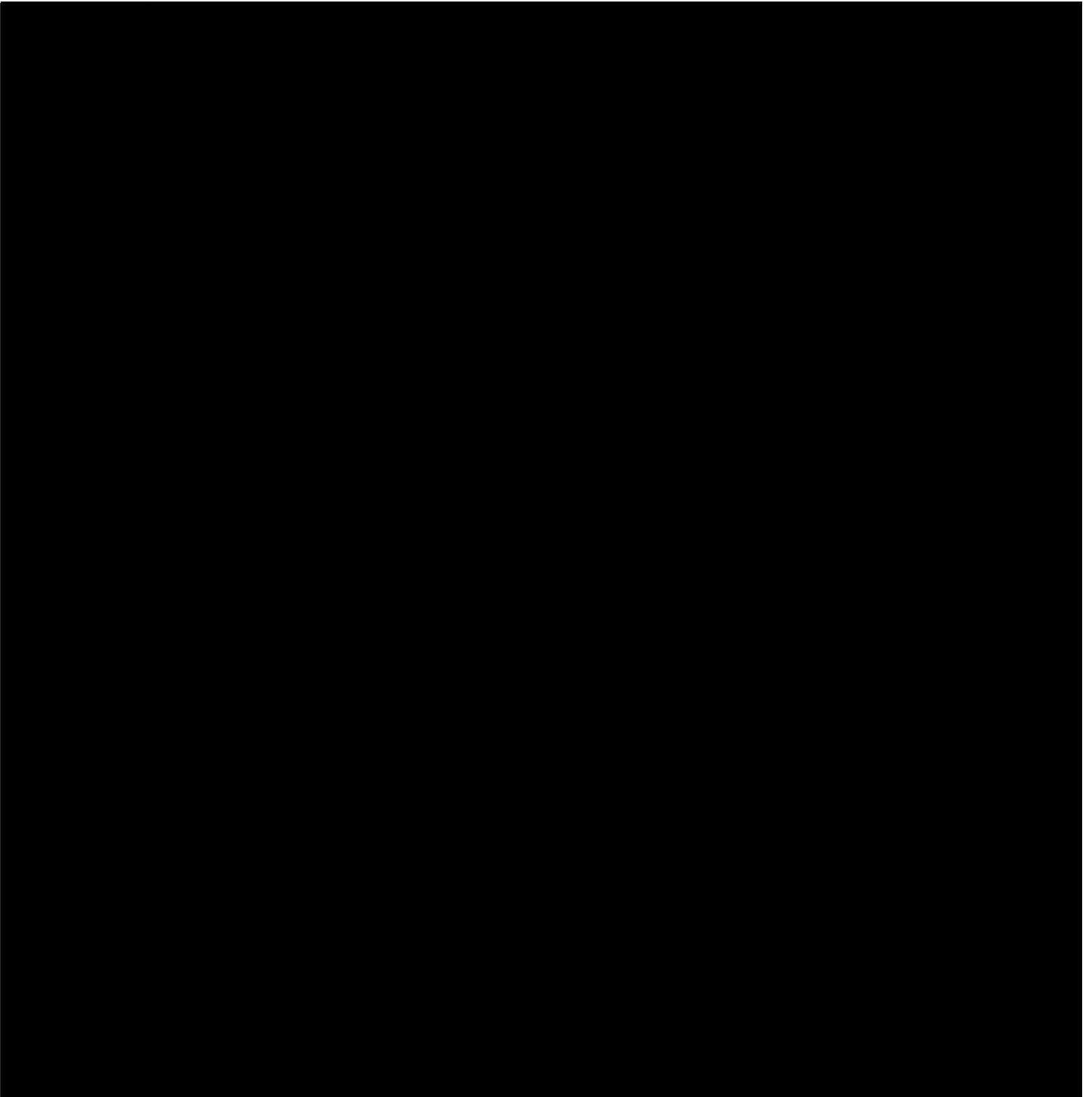
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1.7.2 Site-specific surveys

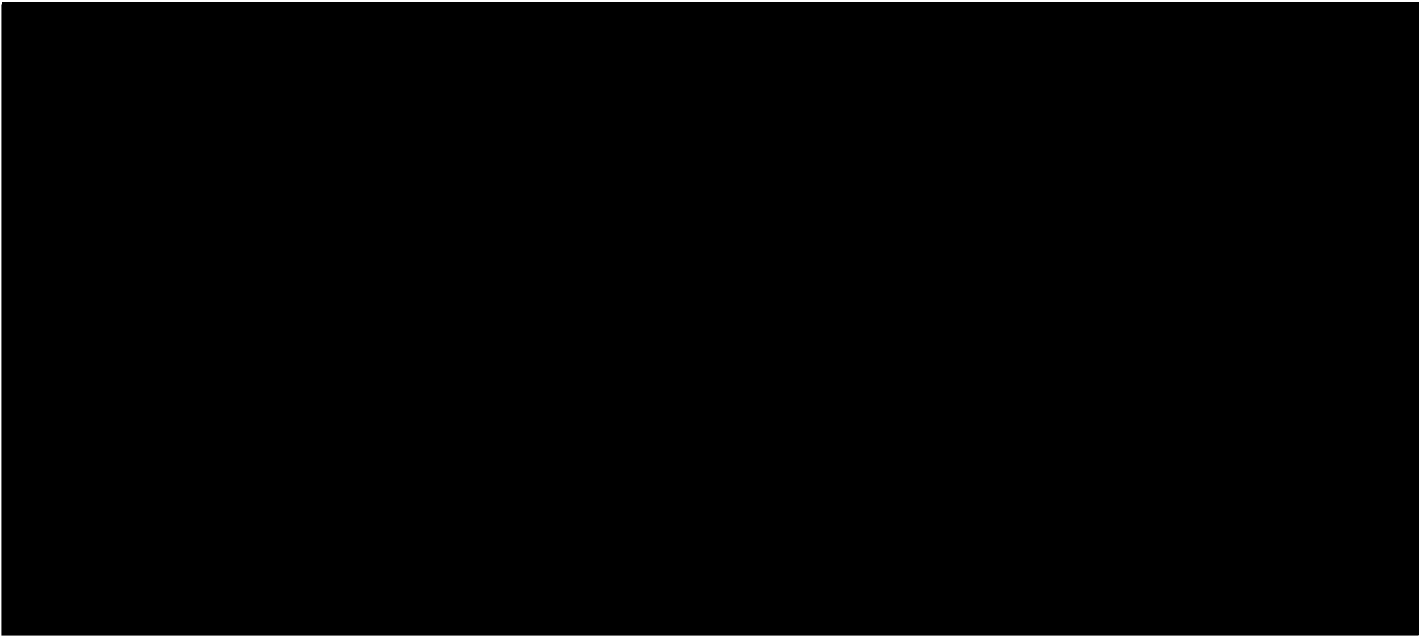
Badger setts

1.7.2.1

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Figure 1.2: Badger setts recorded within badger survey area (removed – confidential information).

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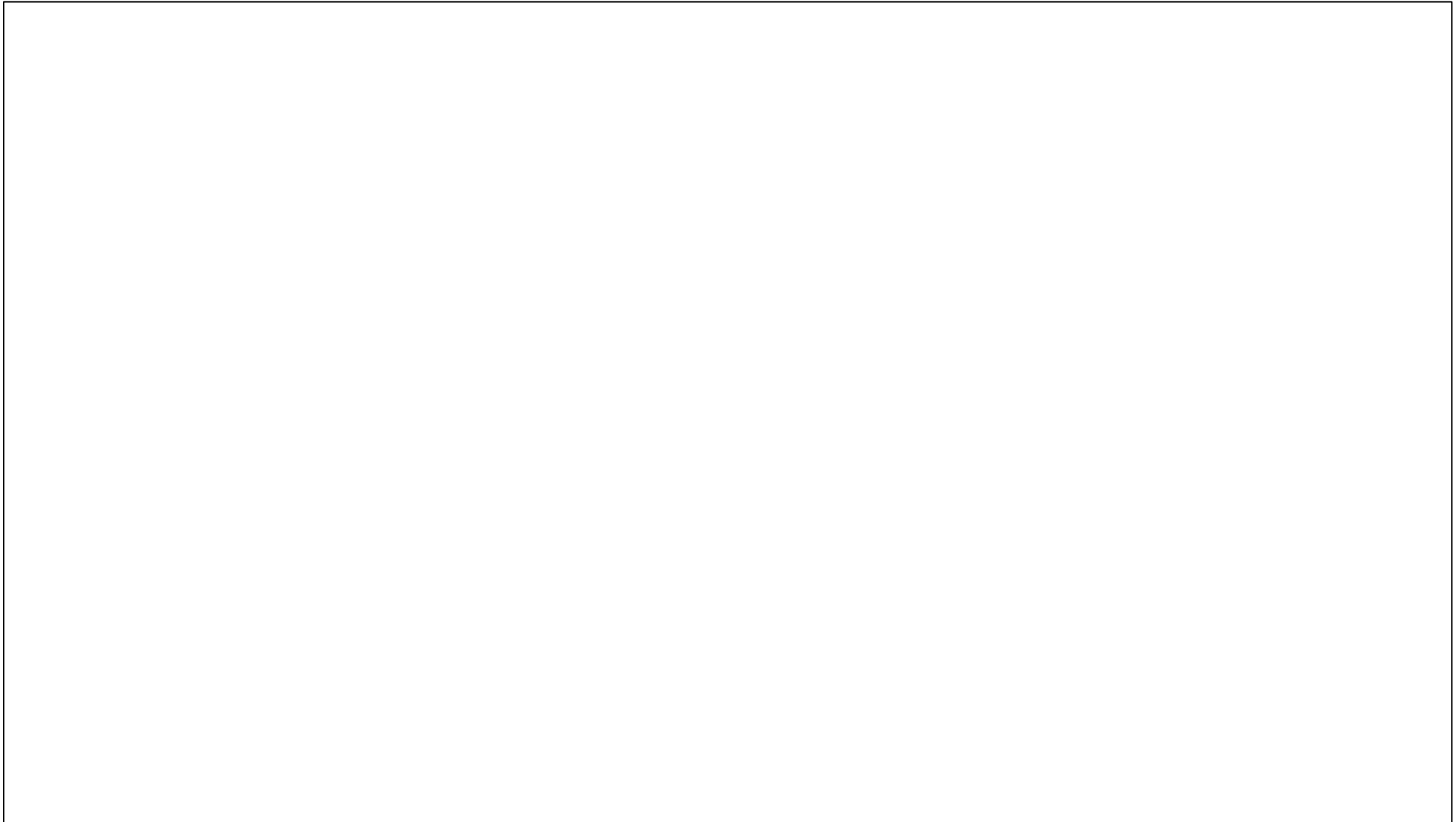


Figure 1.3: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.4: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.5: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.6: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.7: Badger setts recorded within badger survey area (removed – confidential information).

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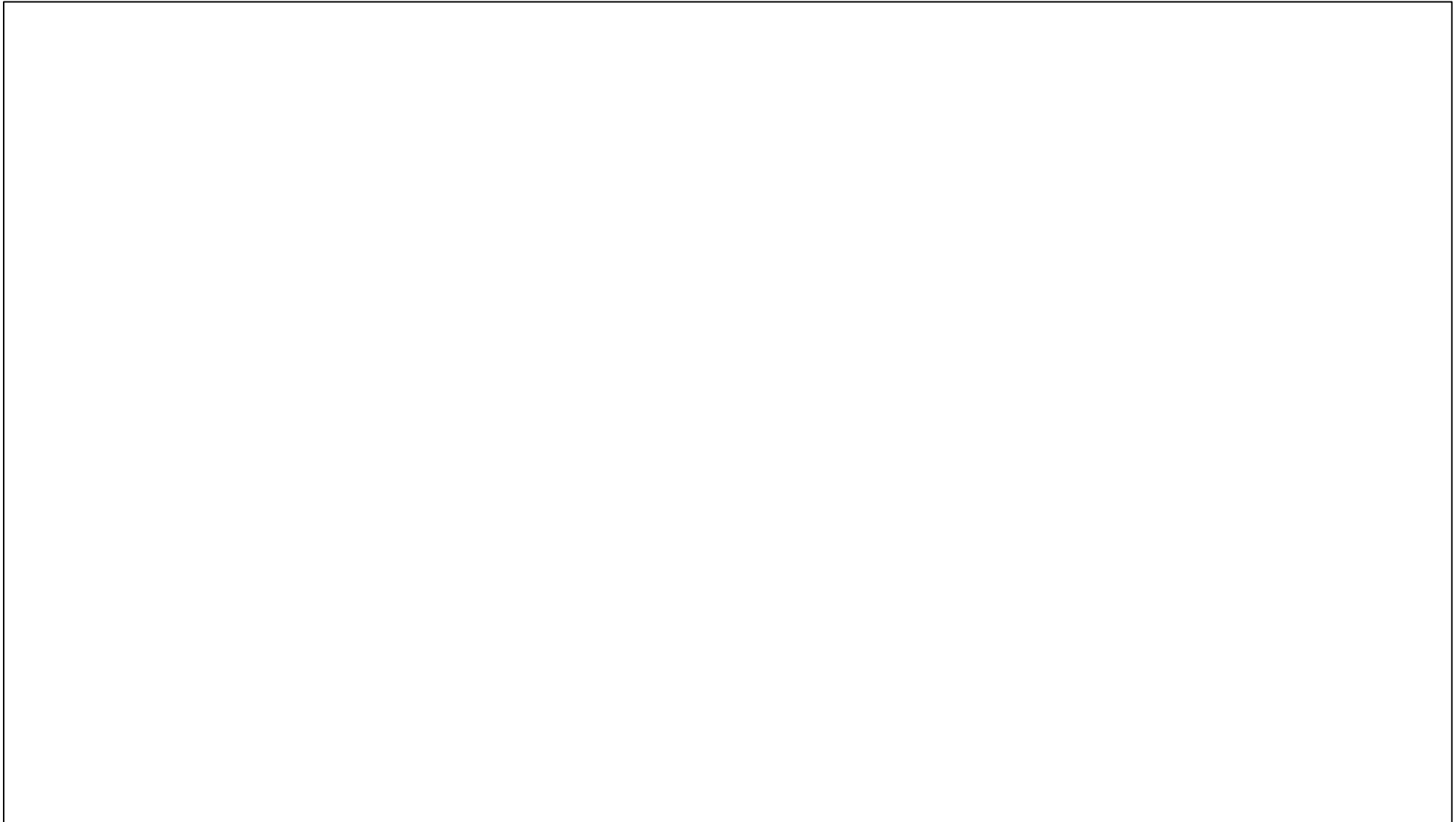


Figure 1.8: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.9: Badger setts recorded within badger survey area (removed – confidential information).

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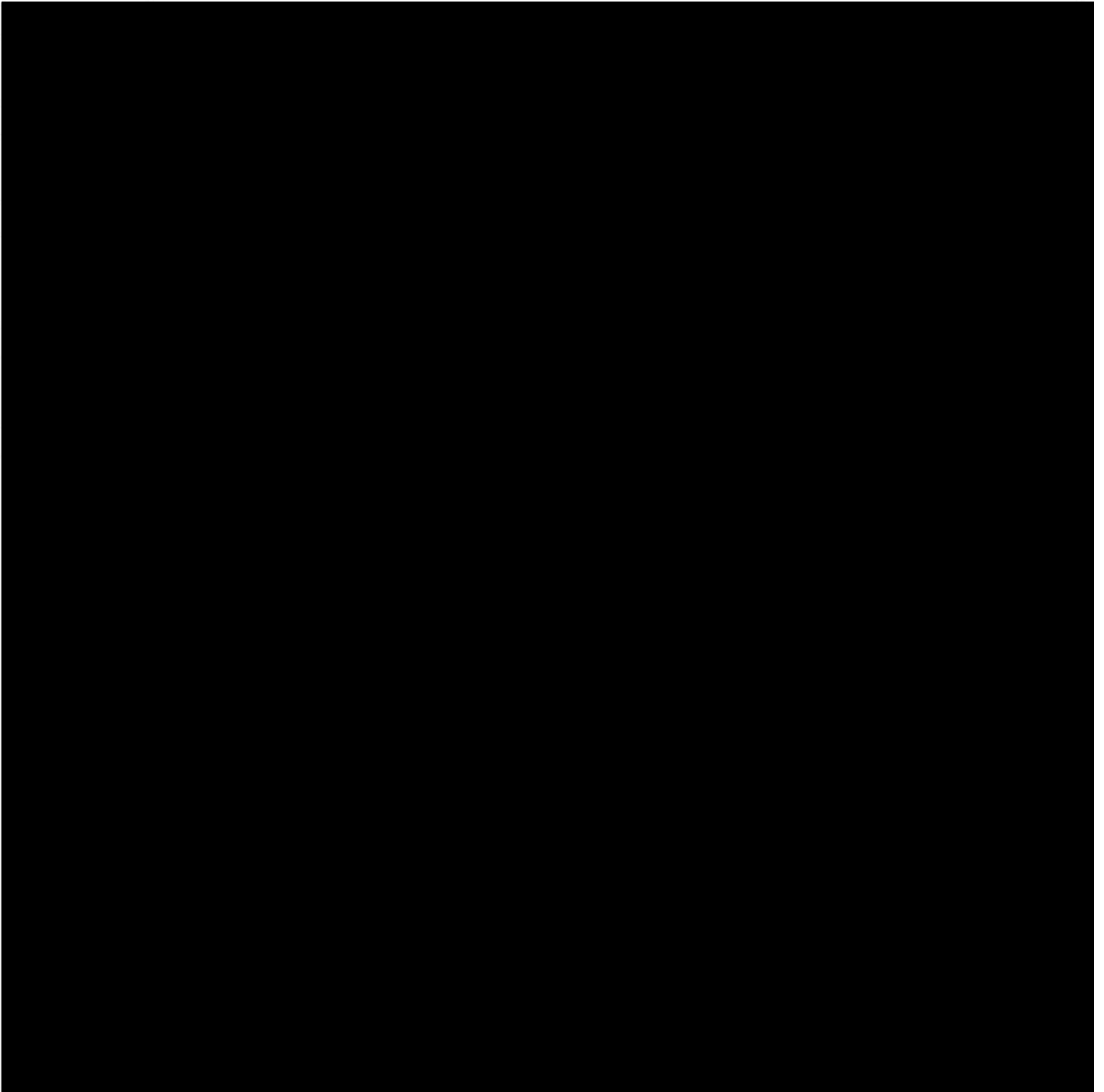
Figure 1.10: Badger setts recorded within badger survey area (removed – confidential information).

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Figure 1.11: Badger setts recorded within badger survey area (removed – confidential information).

1.7.3 Other field signs



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Figure 1.12: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.13: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.14: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.15: Badger field signs recorded within badger survey area (removed – confidential information).



Figure 1.16: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.17: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.18: Badger field signs recorded within badger survey area (removed – confidential information).

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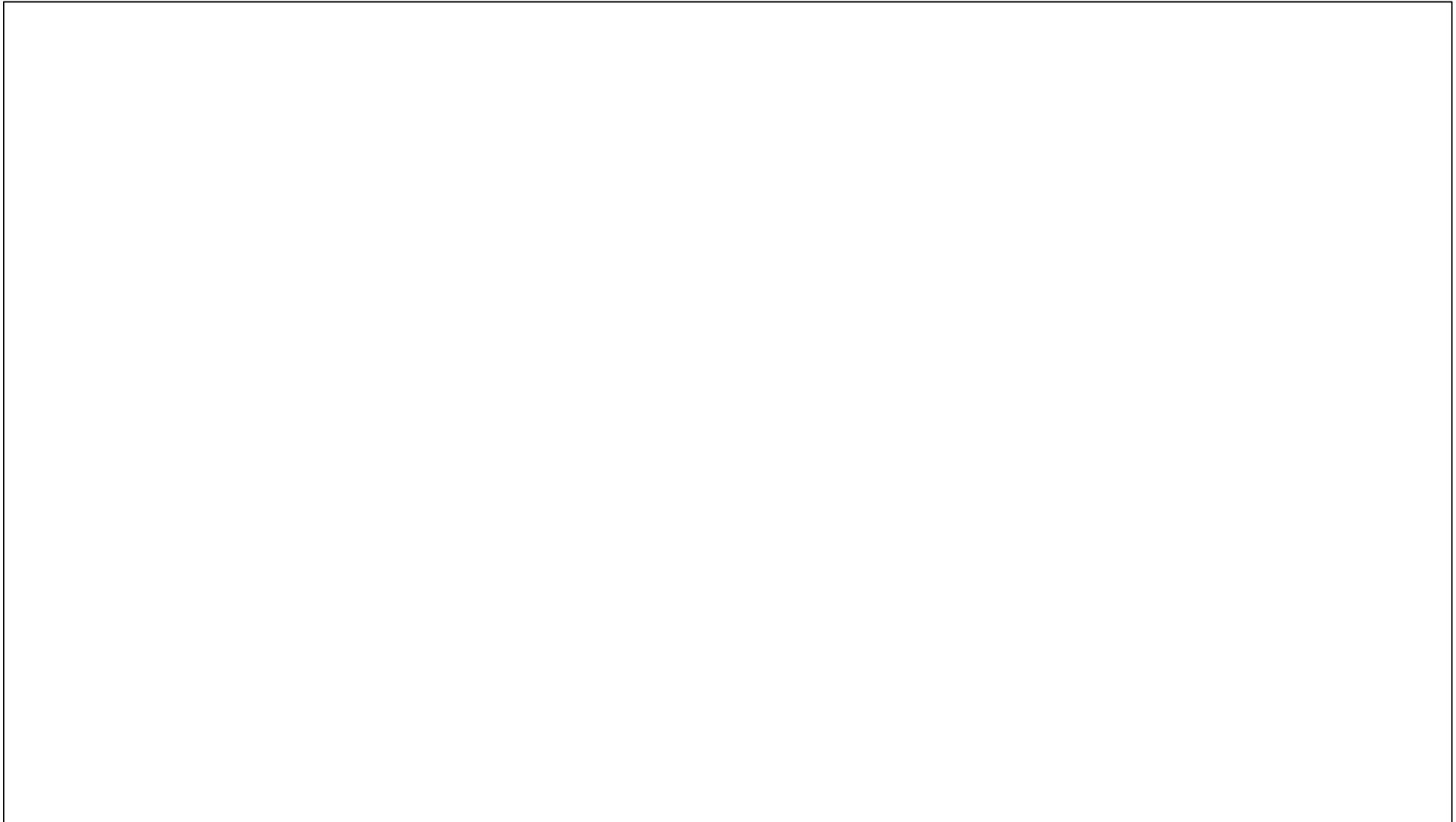


Figure 1.19: Badger field signs recorded within badger survey area (removed – confidential information).

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Figure 1.20: Badger field signs recorded within badger survey area (removed – confidential information).

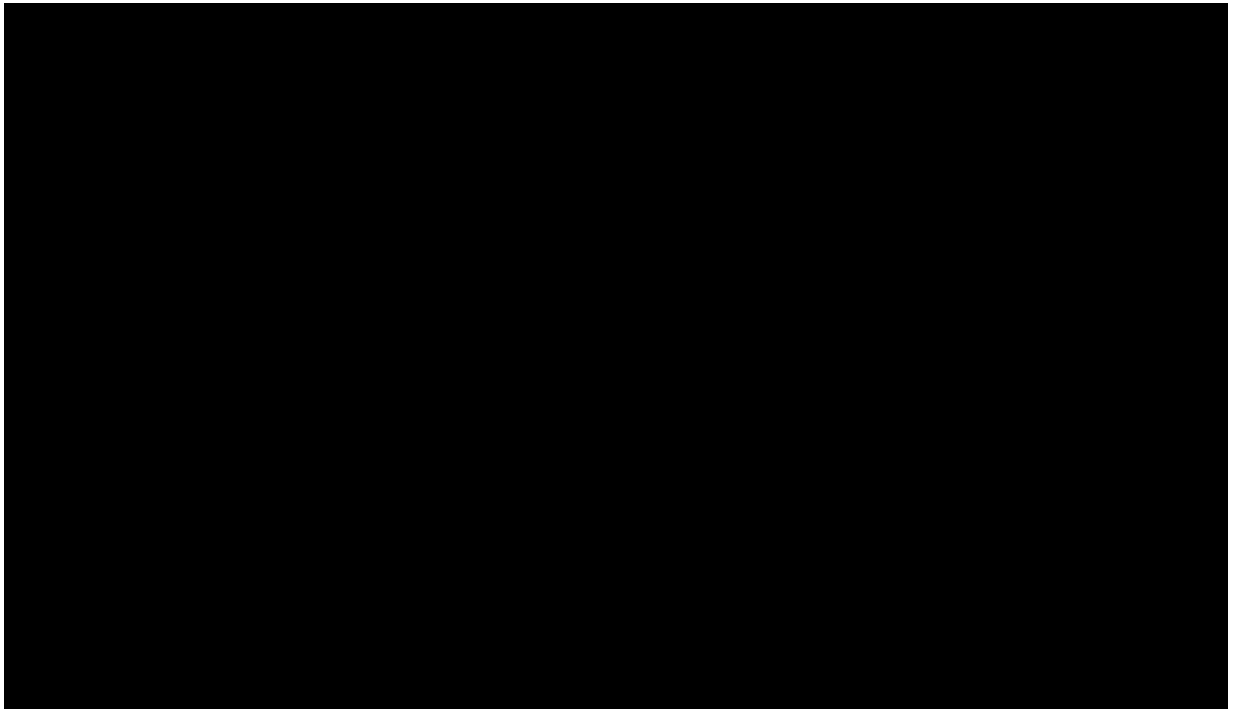
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Figure 1.21: Badger field signs recorded within badger survey area (removed – confidential information).

1.7.4 Badger sett monitoring

1.7.4.1

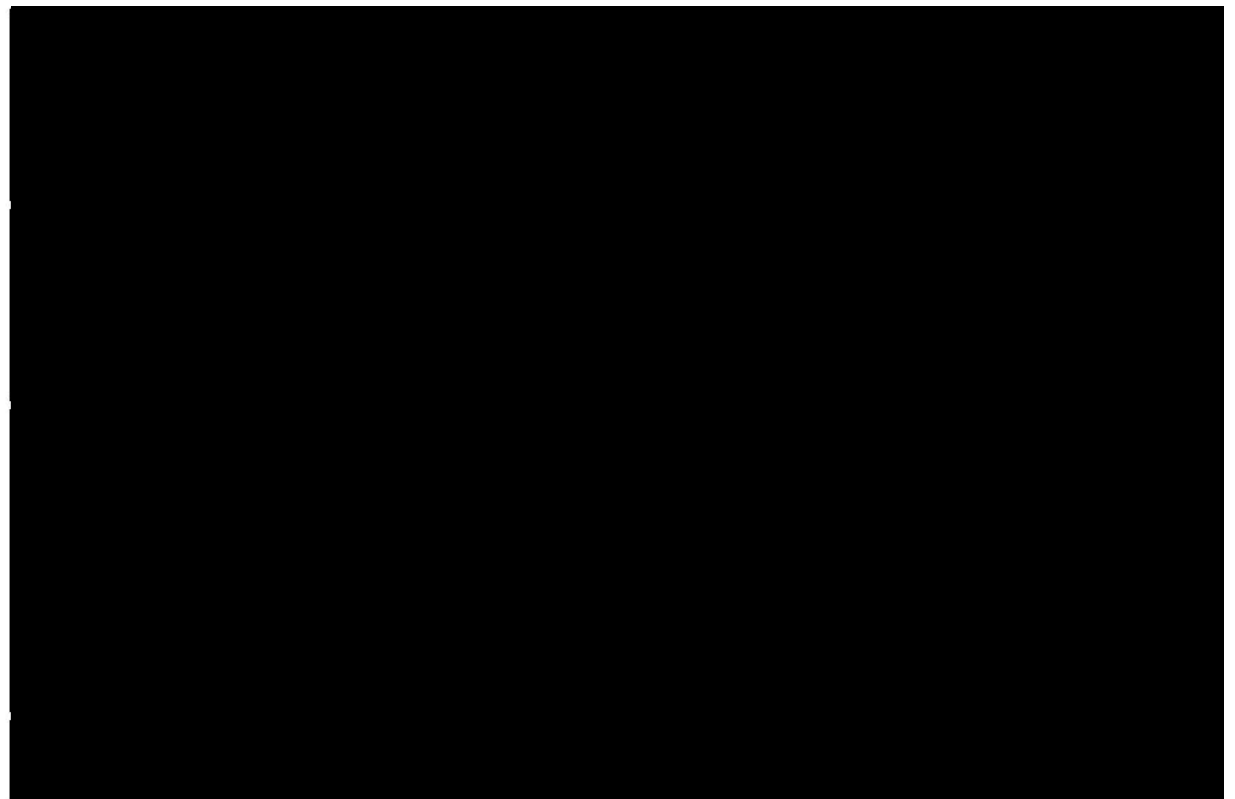


1.8 Summary

1.8.1.1

This technical report presents the results of the badger desk studies and the field surveys undertaken between April and July, and September and October 2023 to inform Volume 3: Chapter 3: Onshore ecology of the Environmental Statement.

1.8.1.2



1.8.1.3

1.8.1.4

1.8.1.5

1.9 References

English Nature (2002). Badgers and development.

Harris, S., Cresswell, P., and Jefferies, D. (1989). Surveying Badgers. The Mammal Society, London.

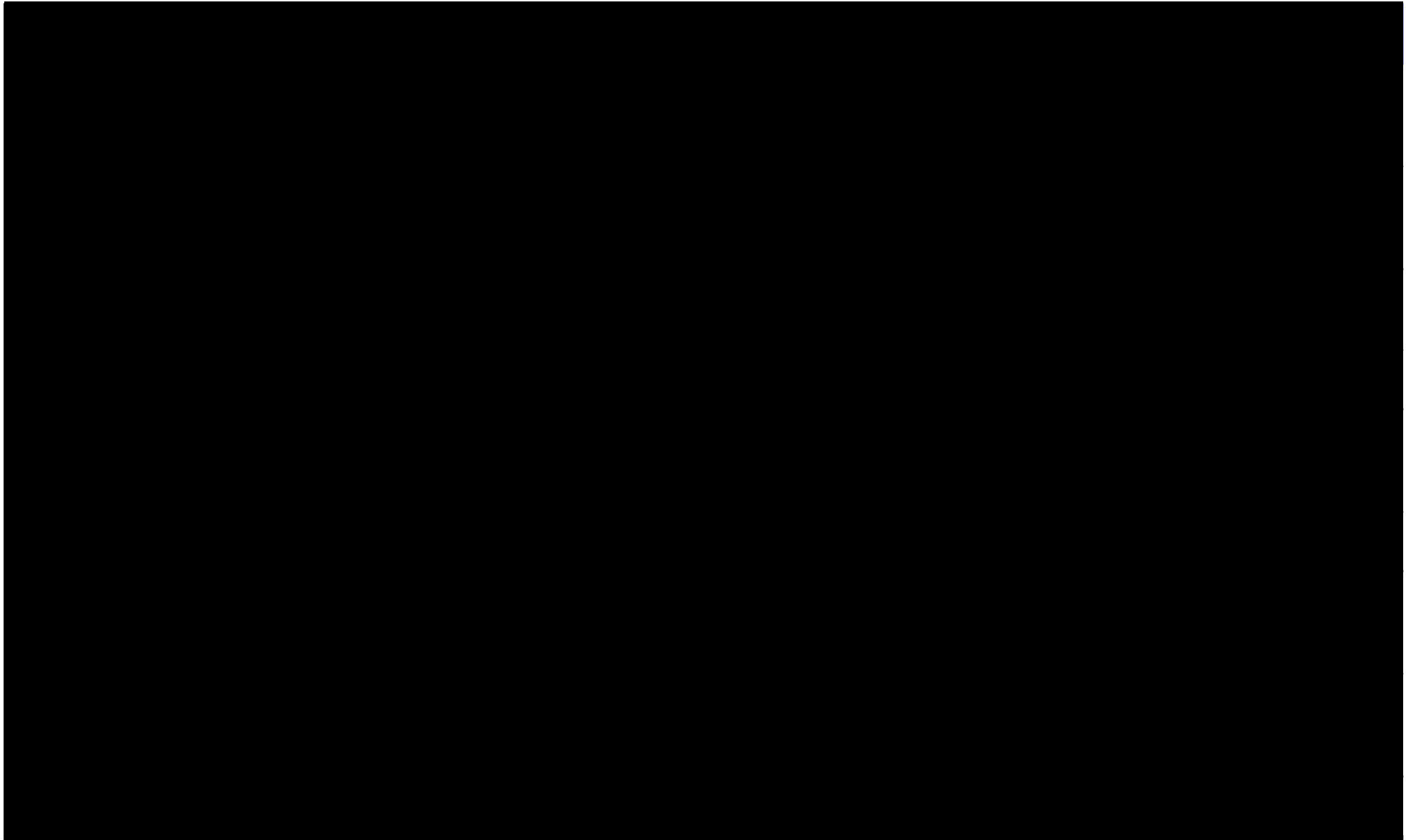
Legislation.gov.uk. The Protection of Badgers Act 1992 [online] Available at: <https://www.legislation.gov.uk/ukpga/1992/51>. Accessed: October 2023.

Natural Resources Wales. A guide for developers 2023 [online] Available at: <https://naturalresources.wales/media/696694/badgers-a-guide-for-developers.pdf?mode=pad&rnd=133216507090000000> Accessed: November 2023.

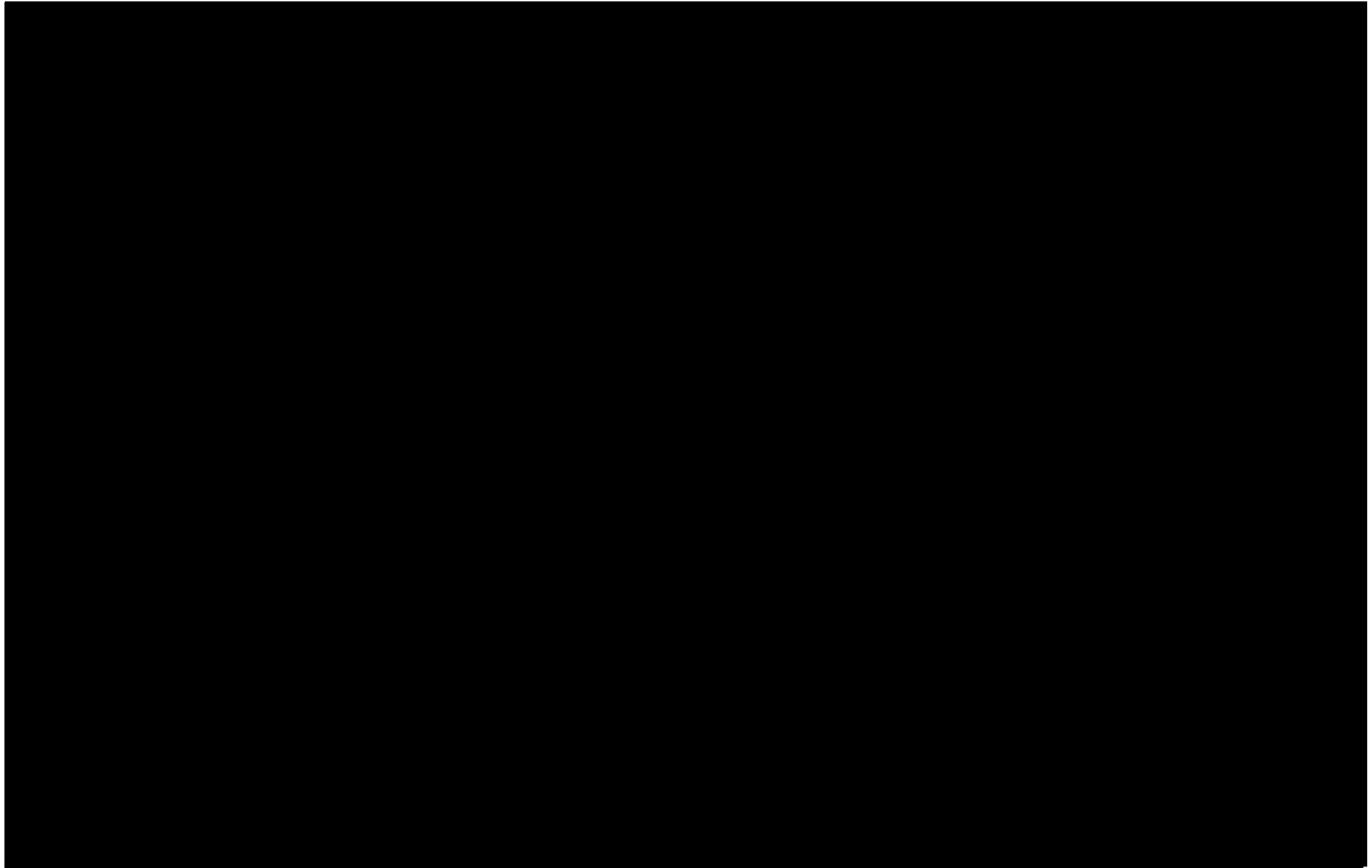
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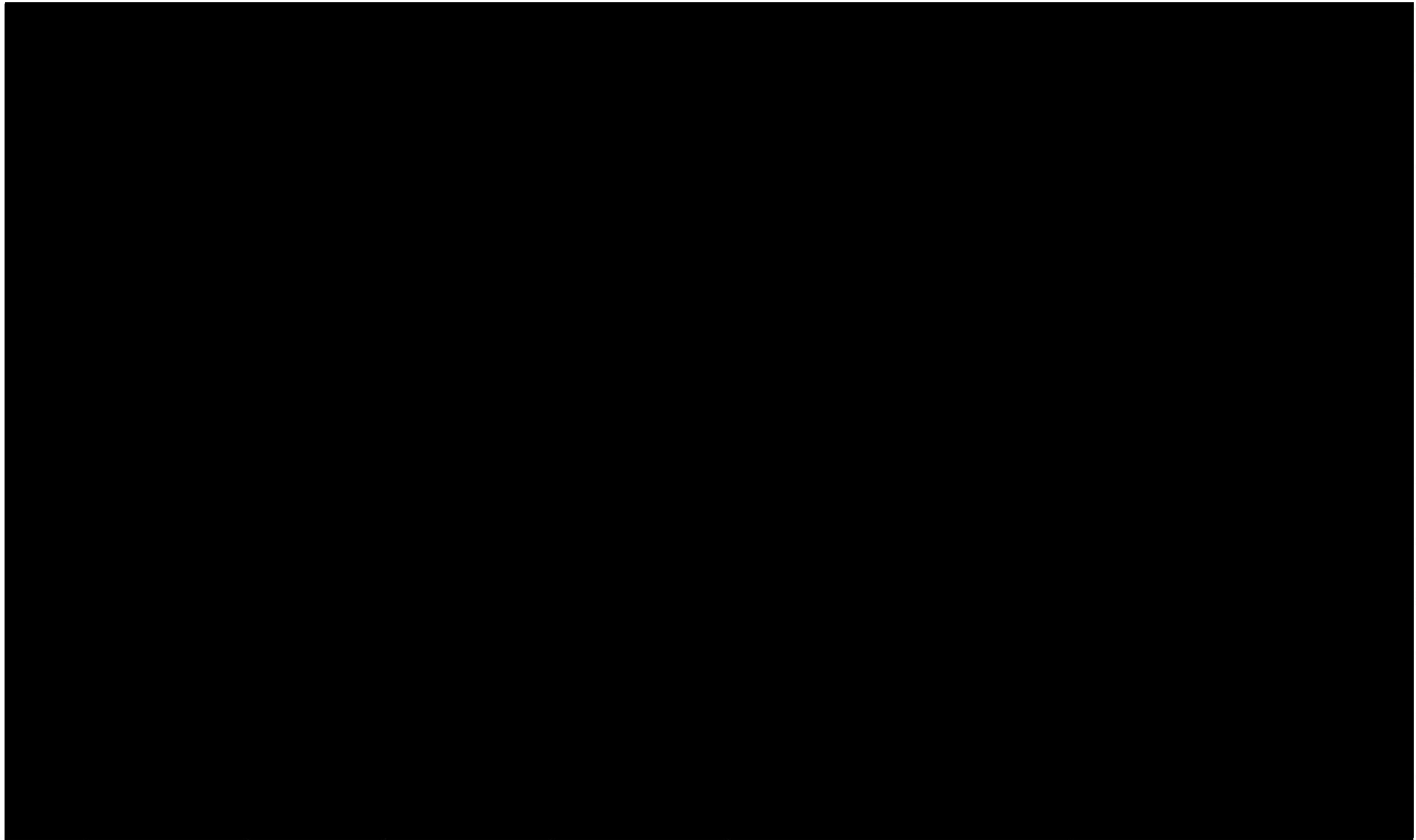
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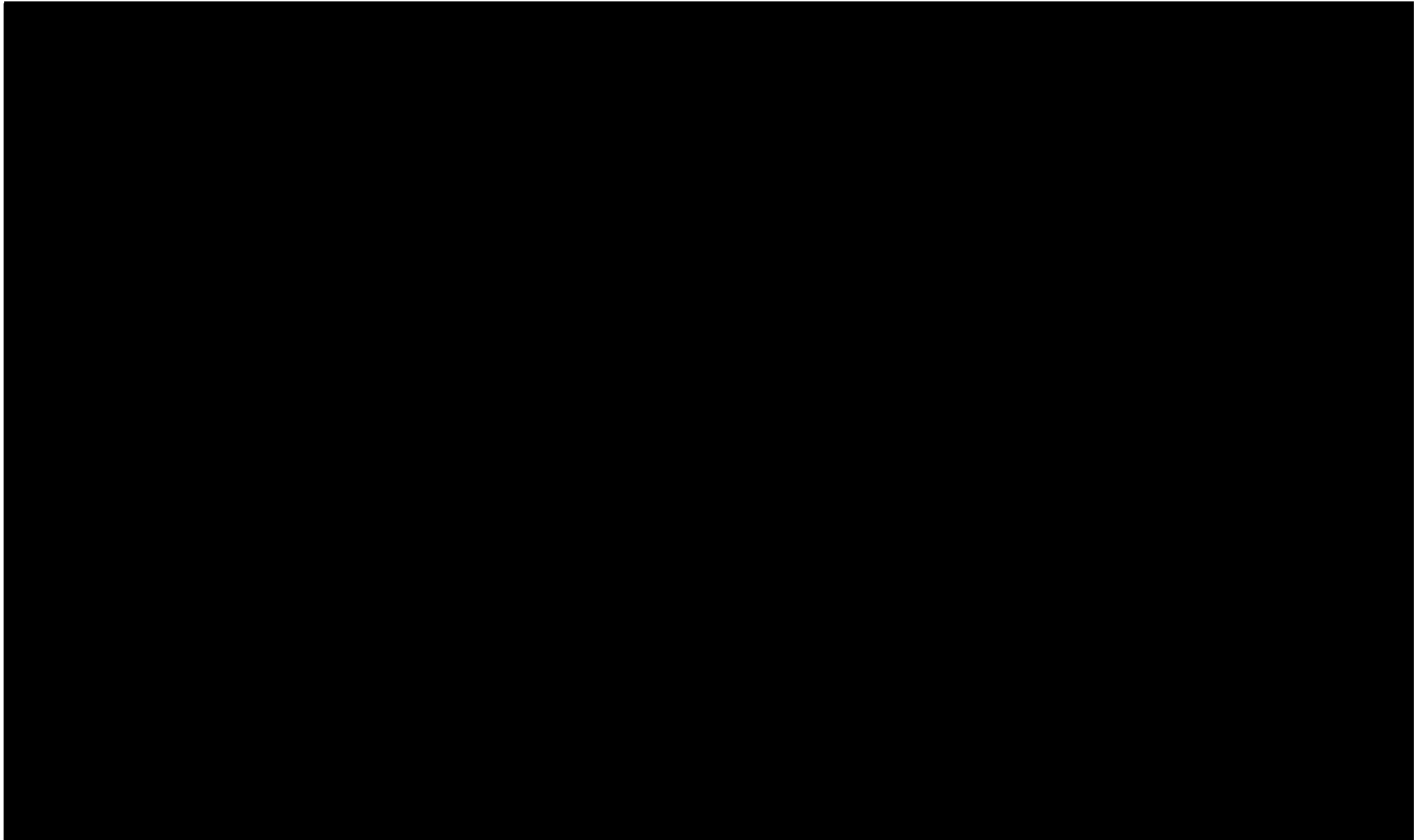
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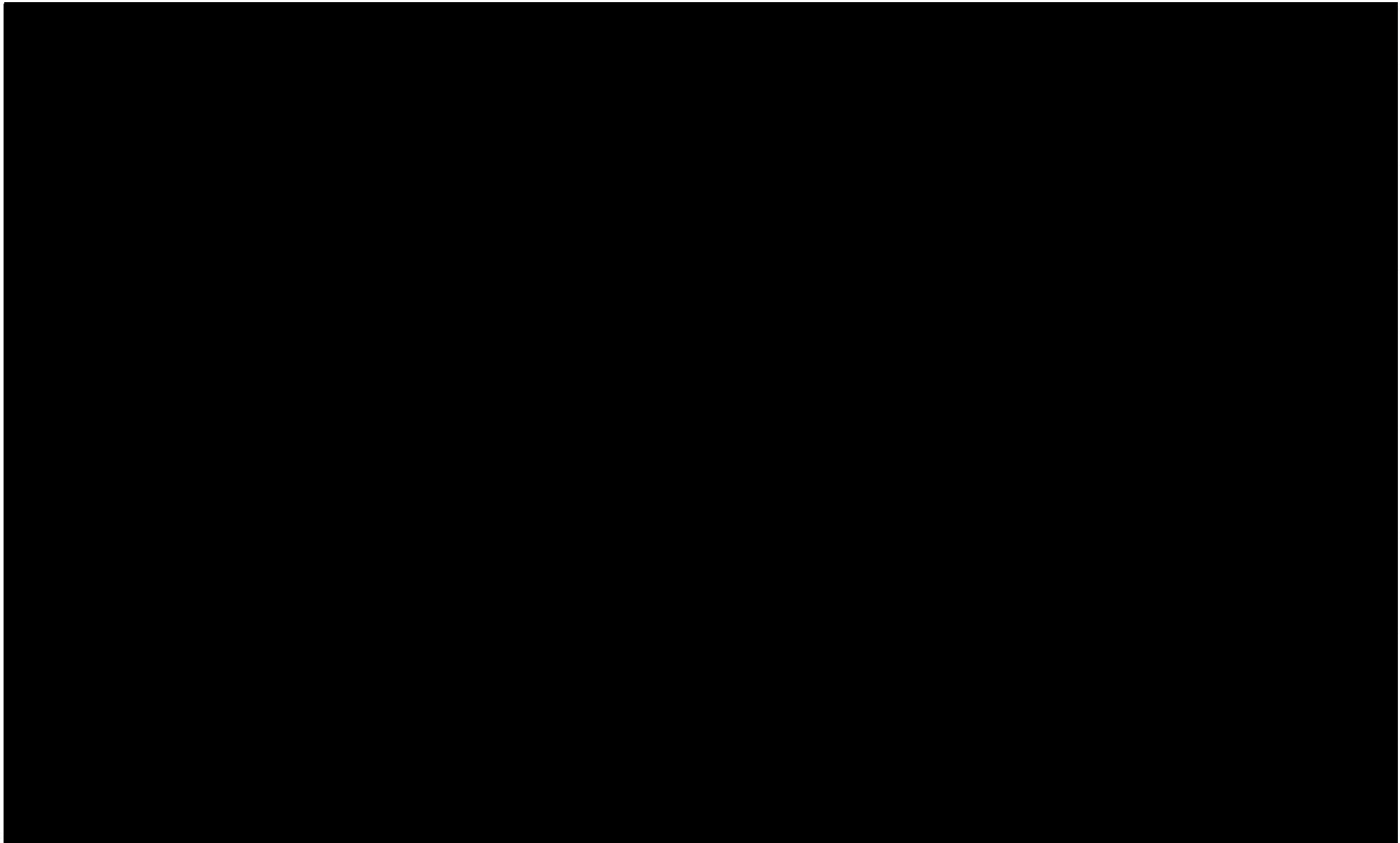
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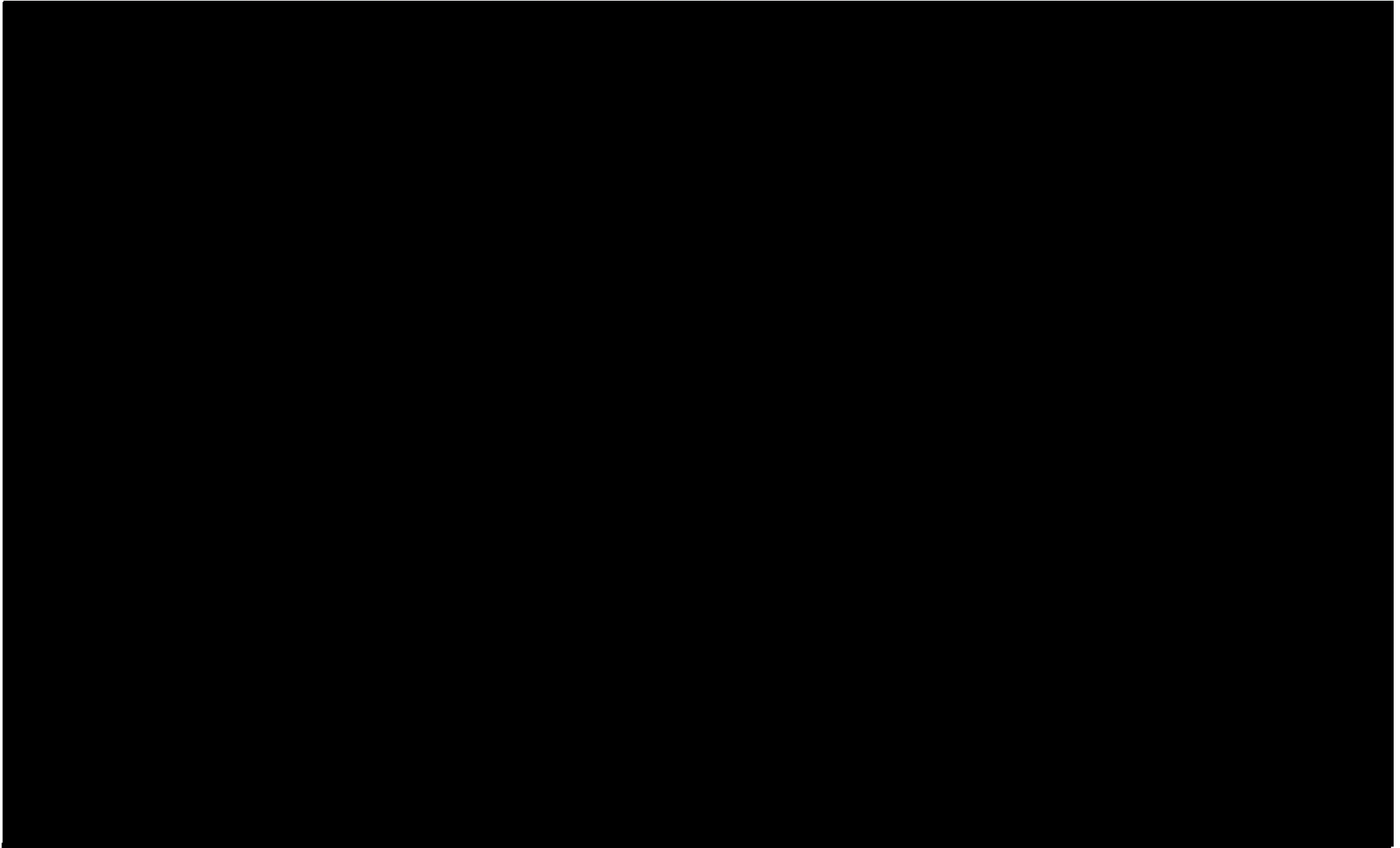
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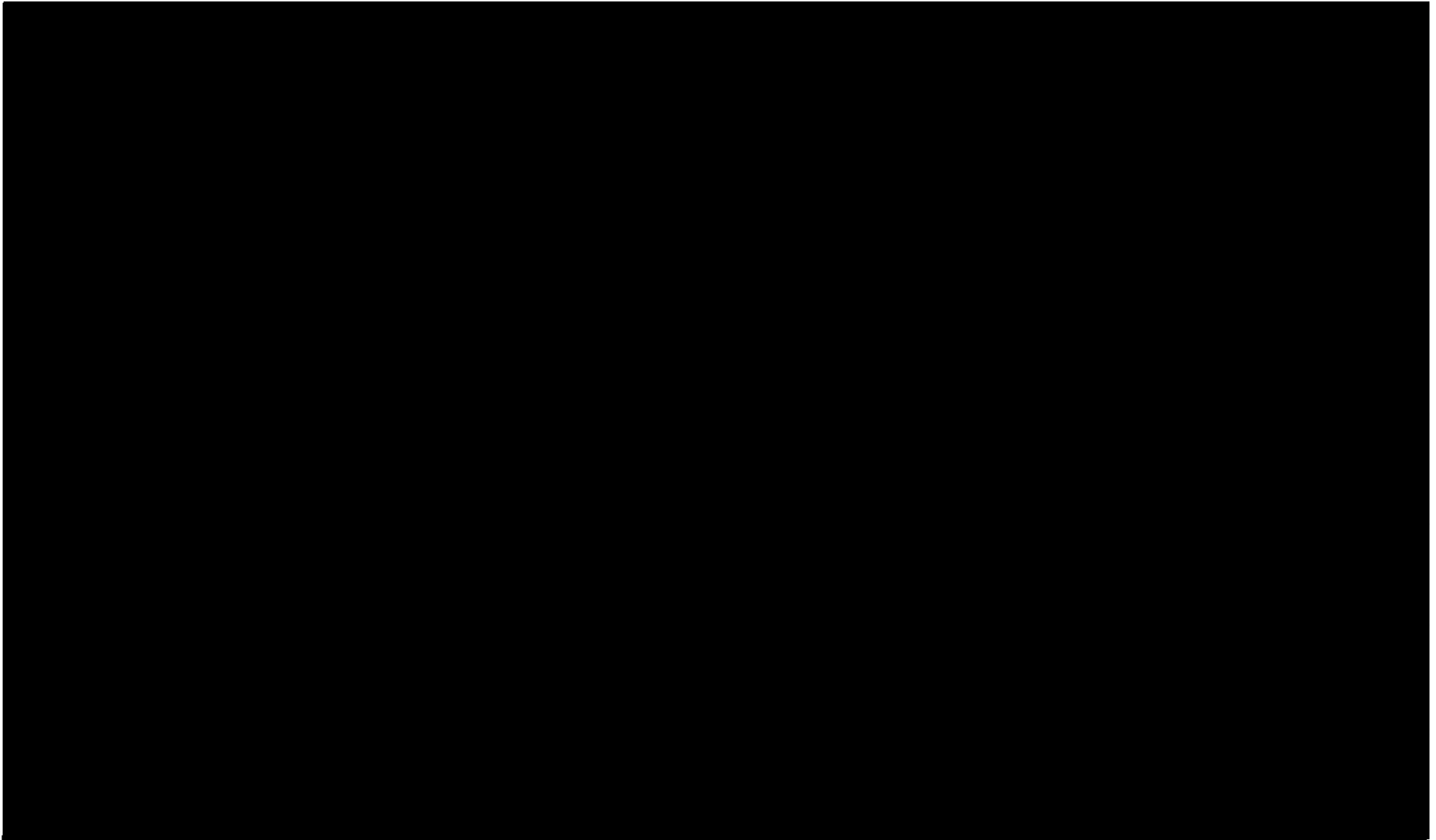
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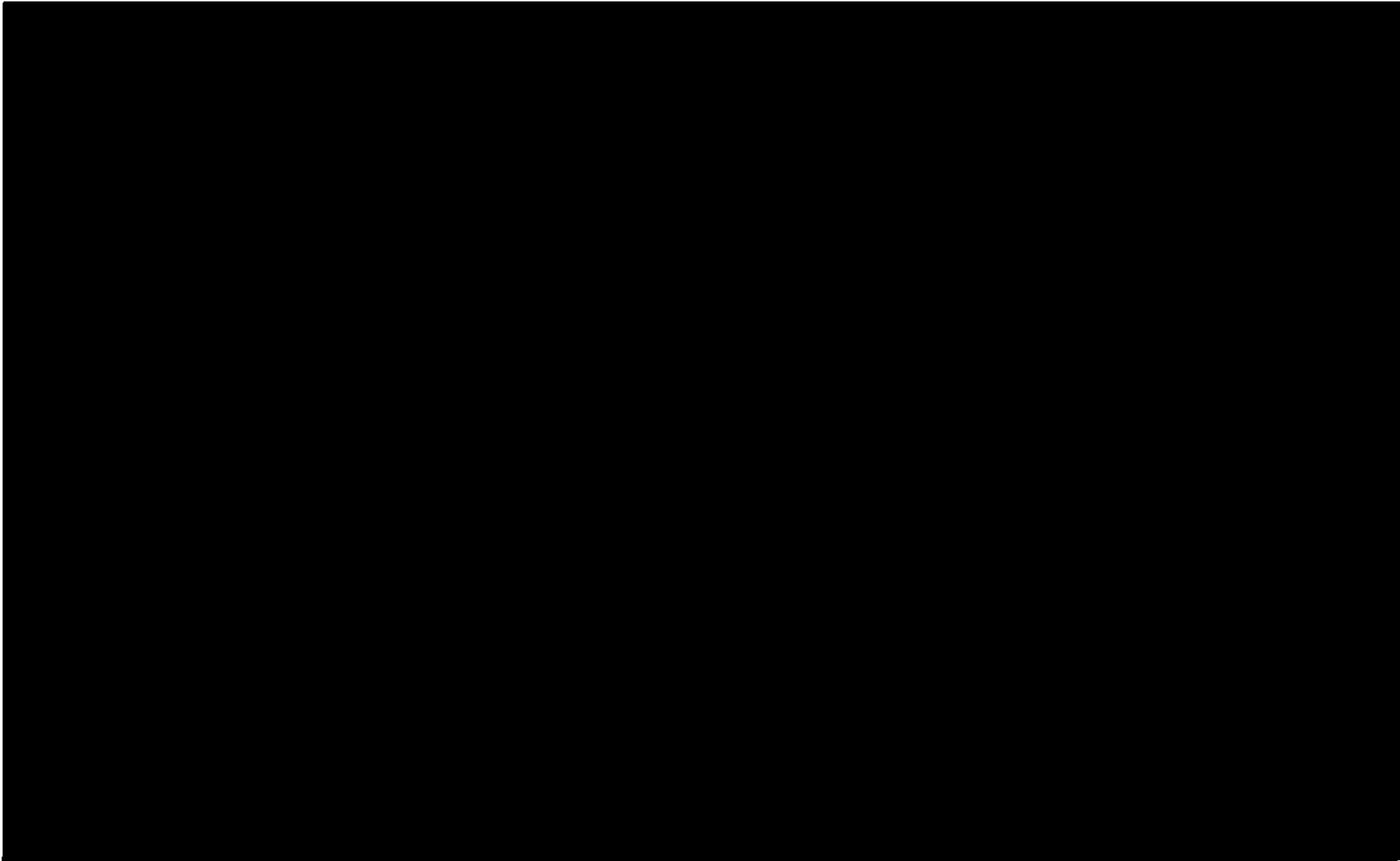
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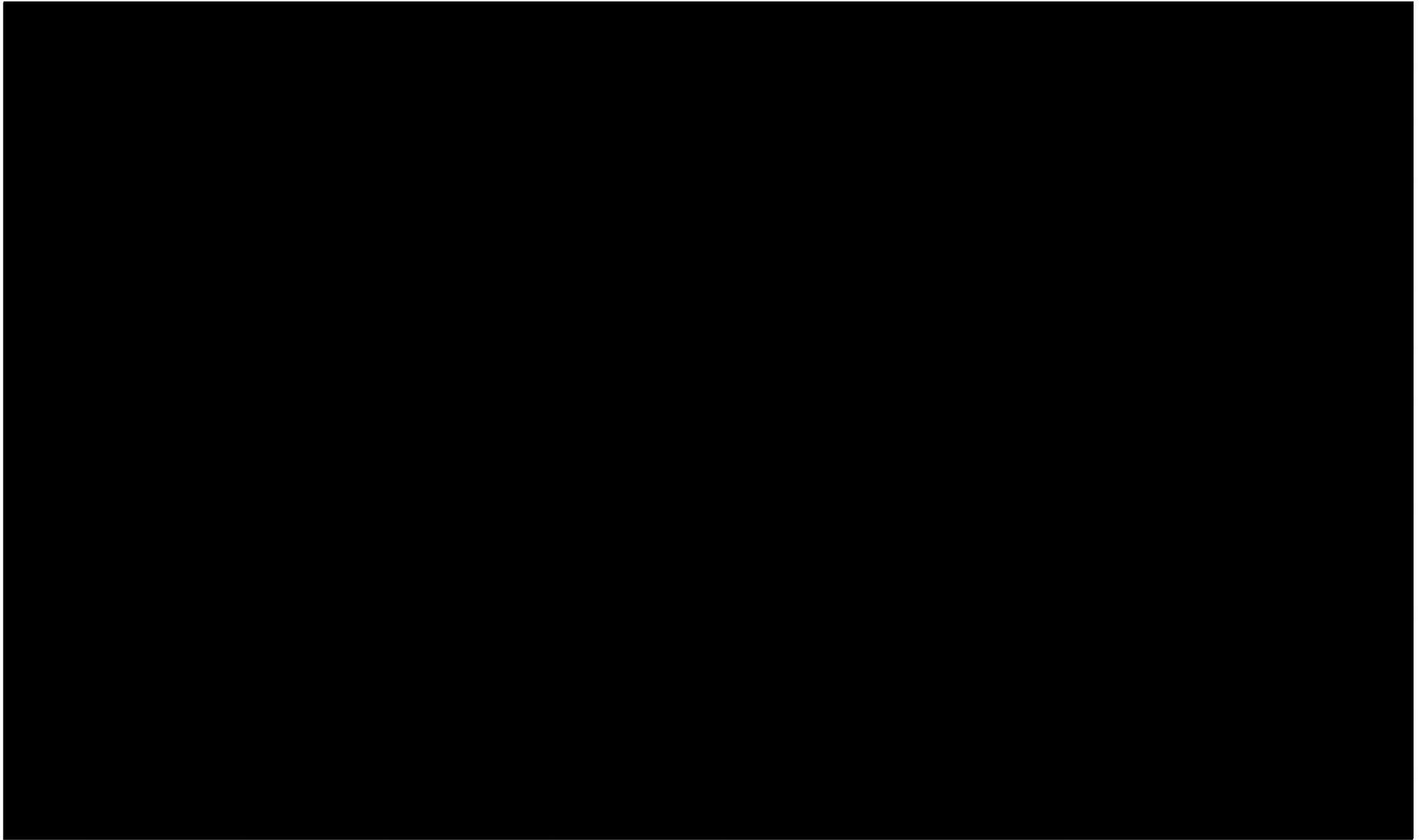
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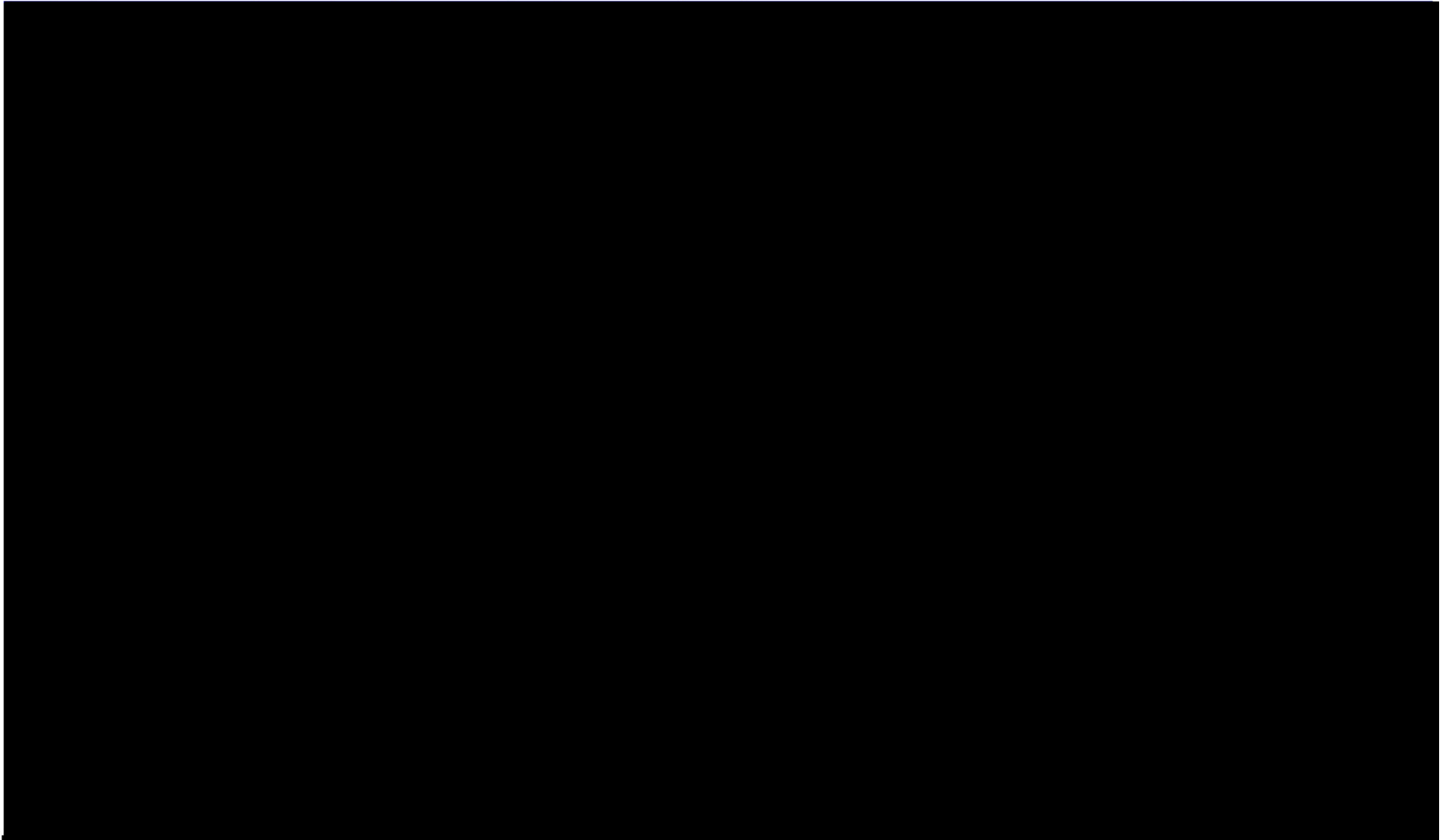
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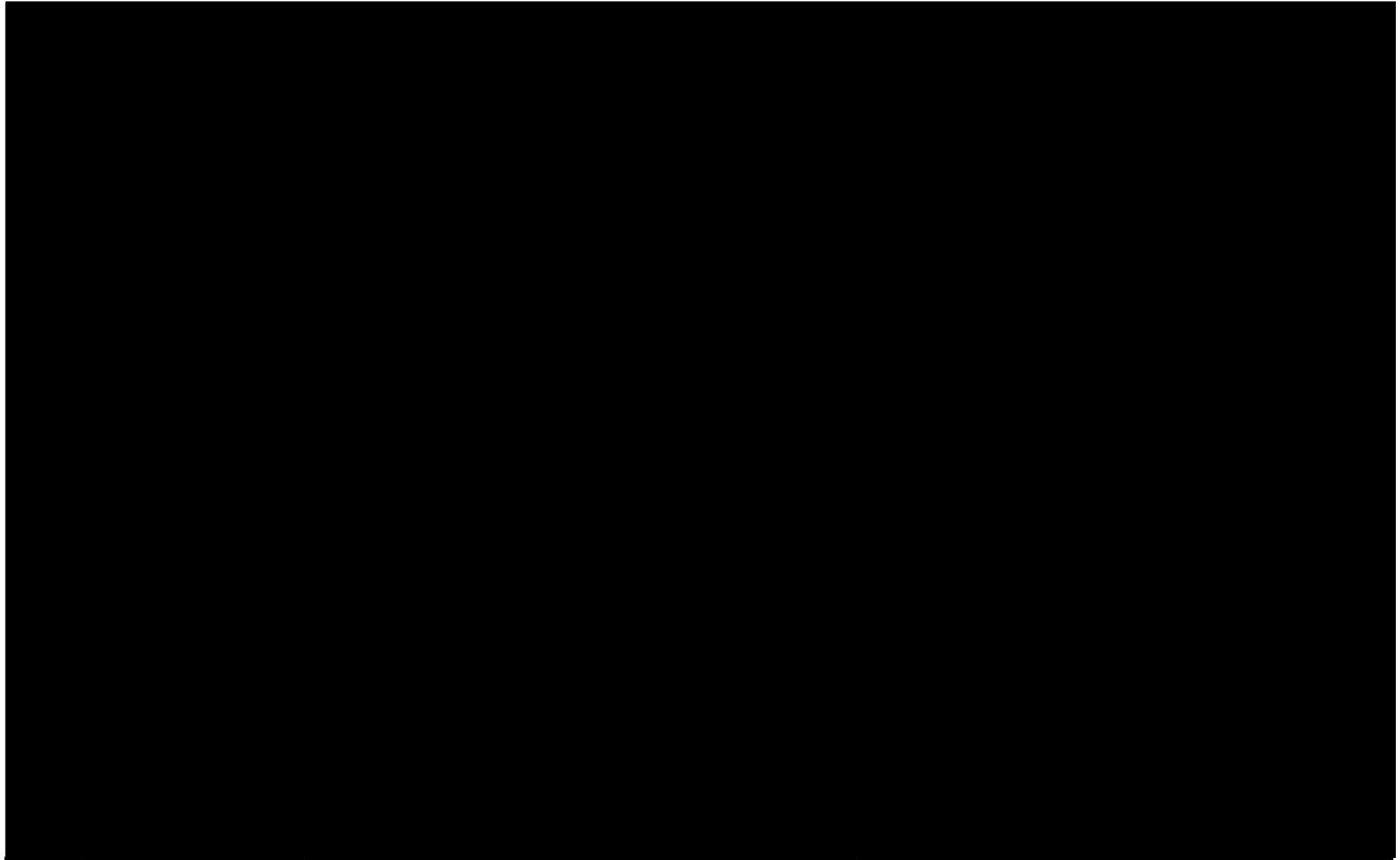


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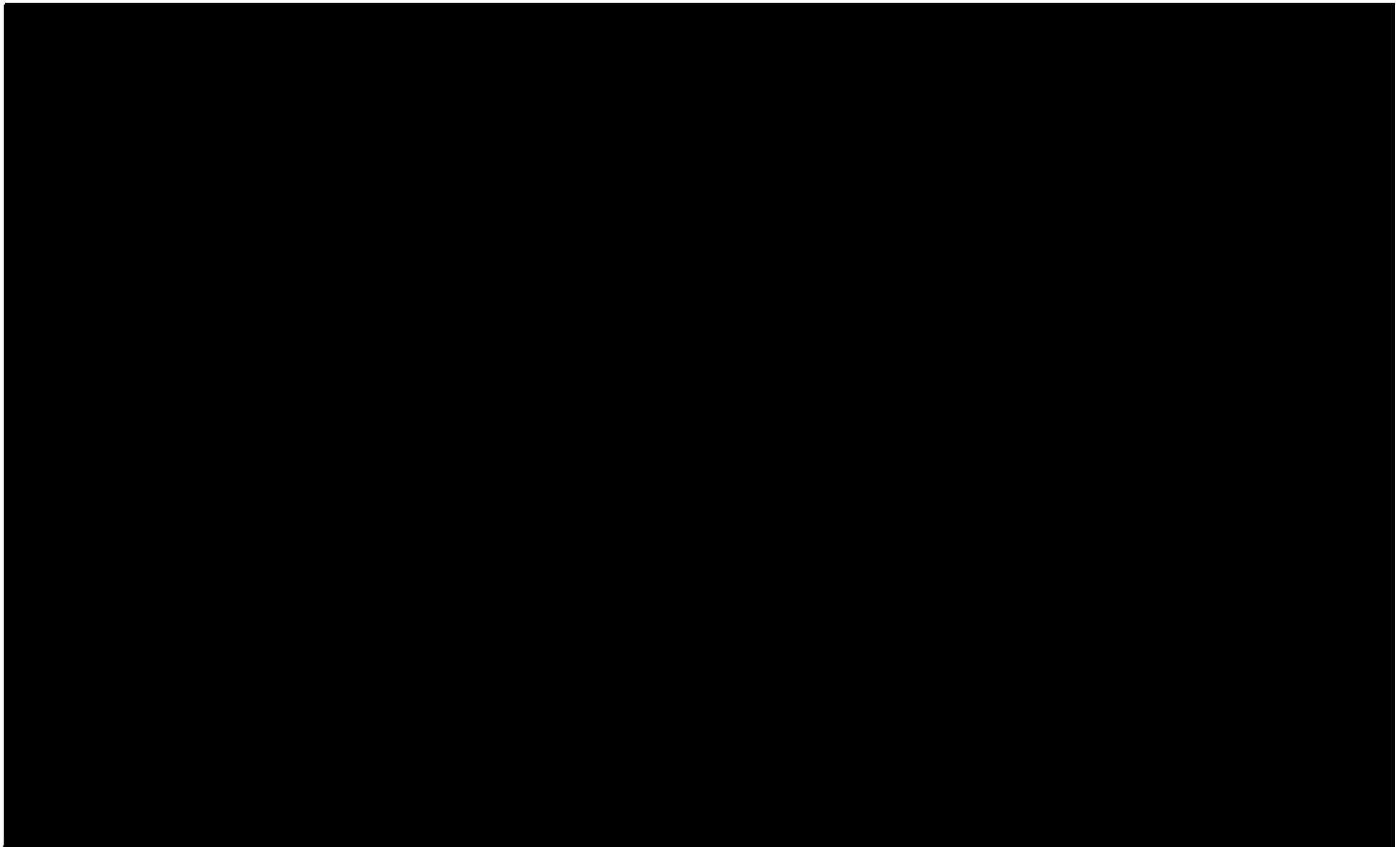


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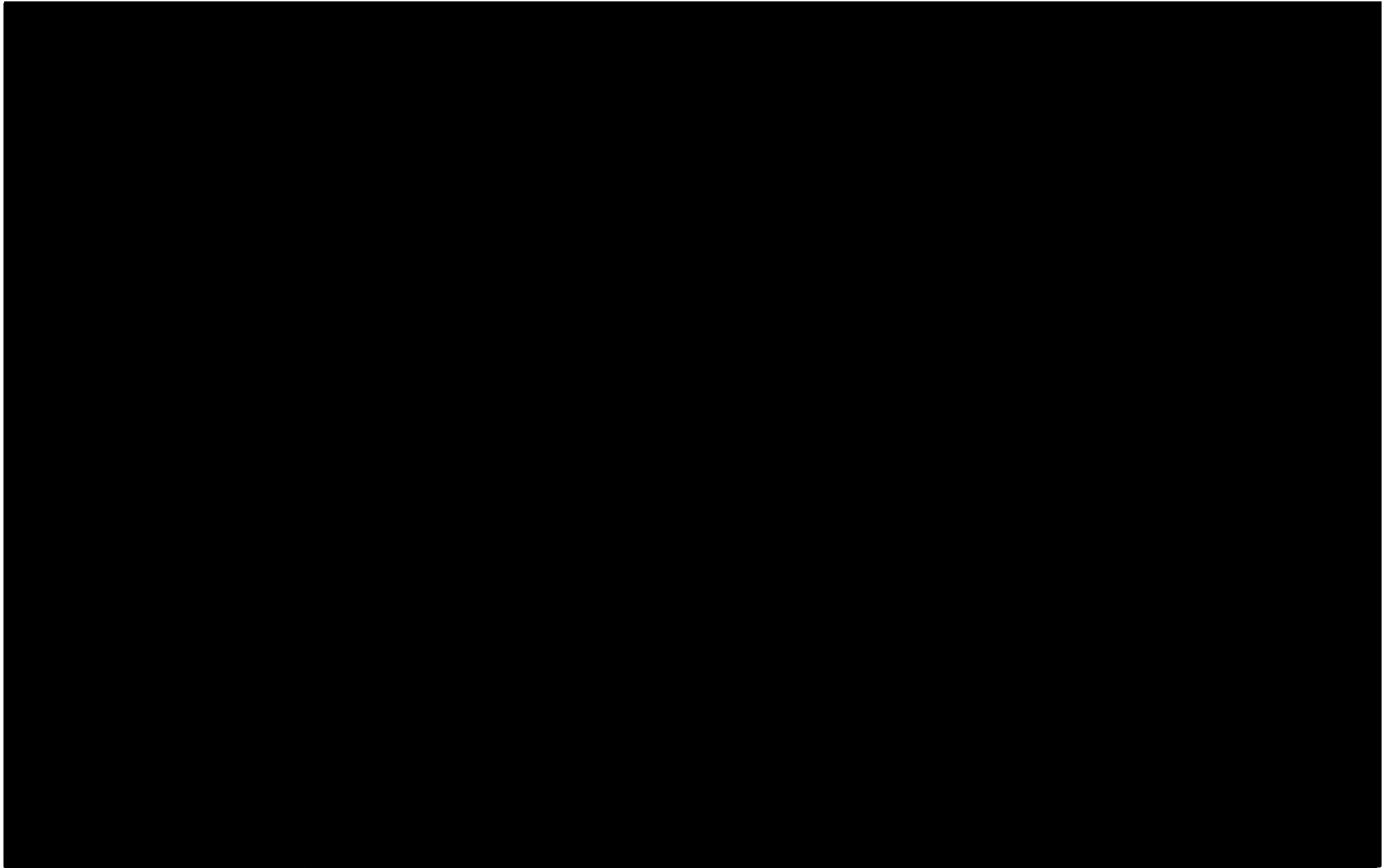
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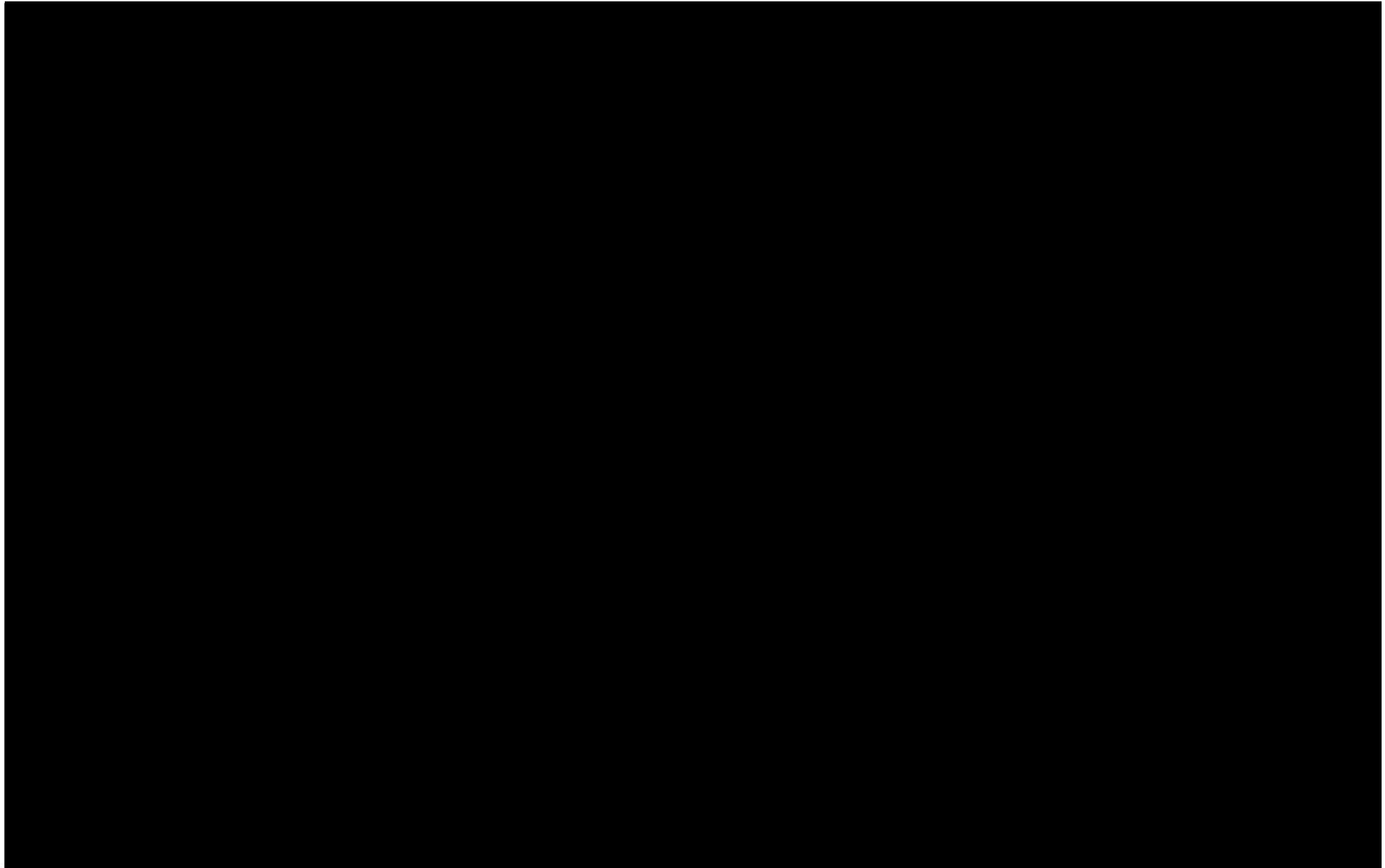
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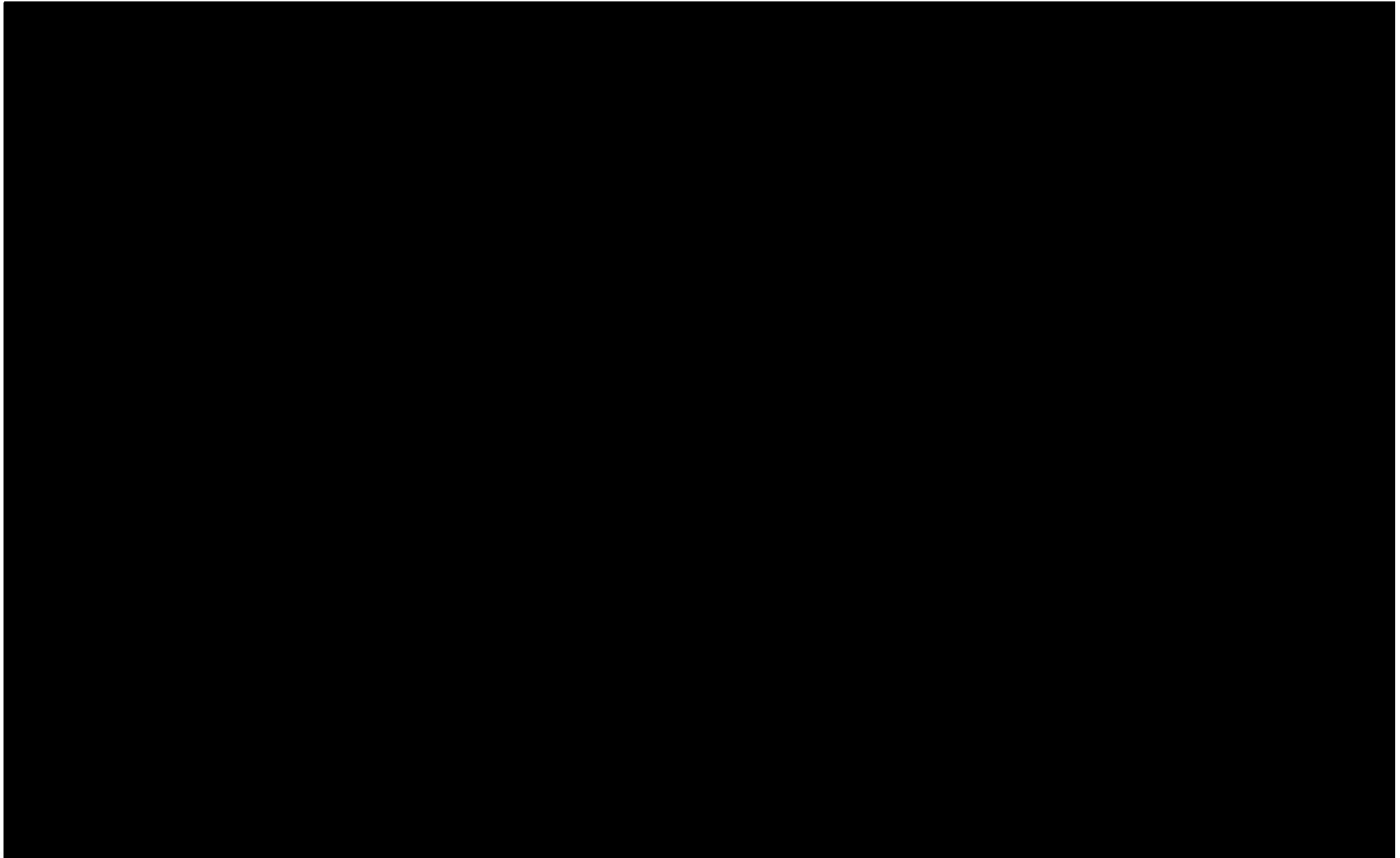
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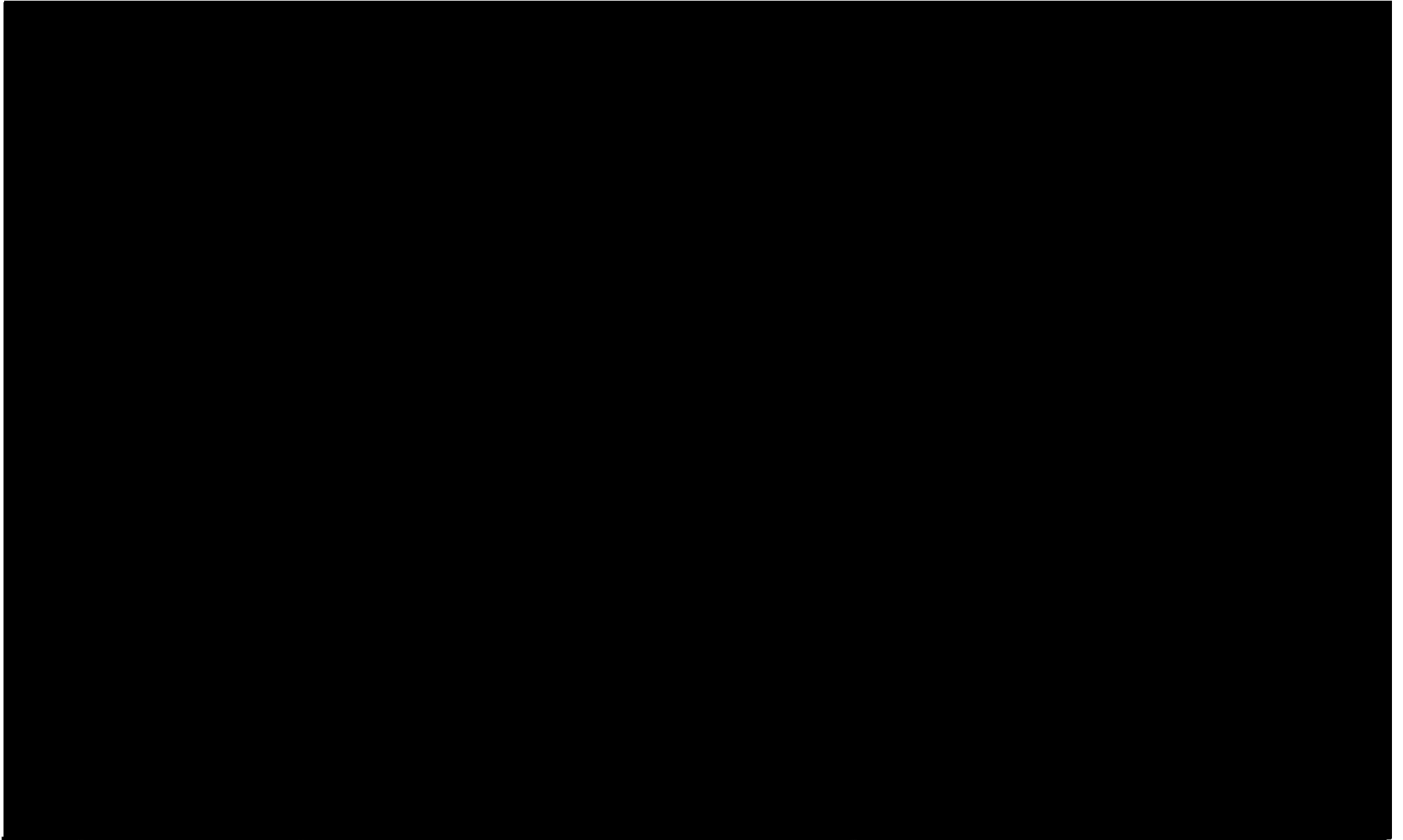
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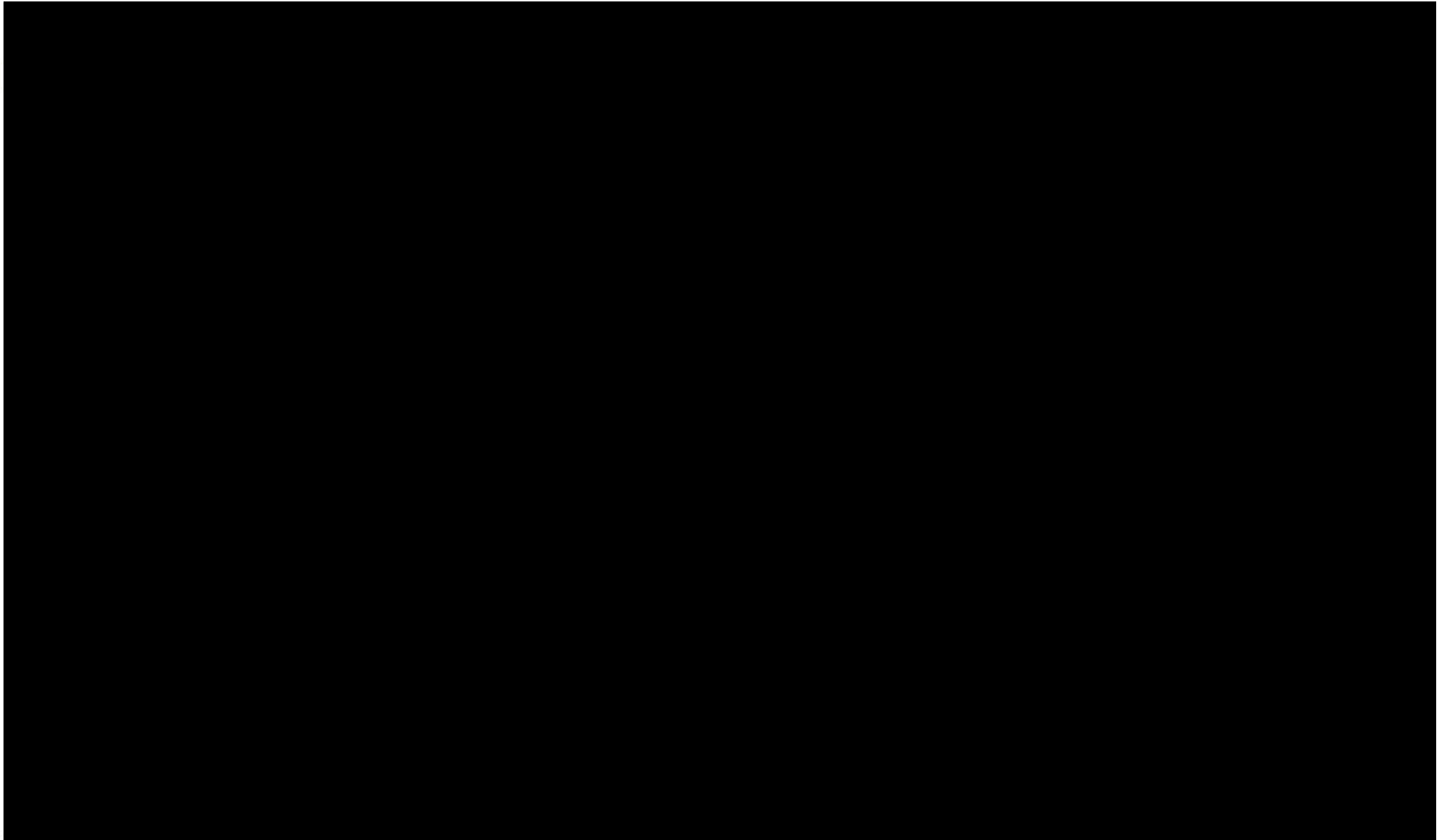
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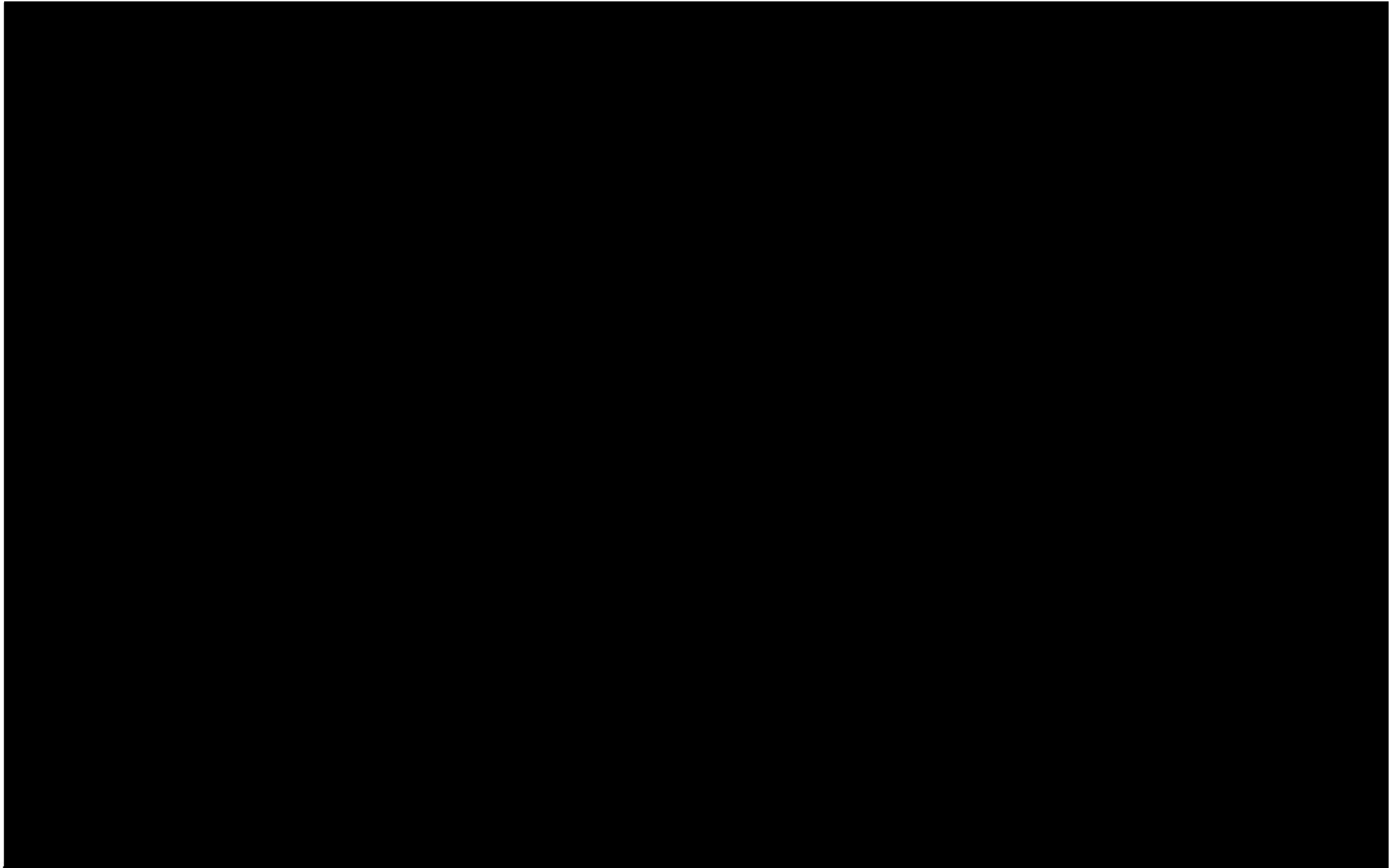
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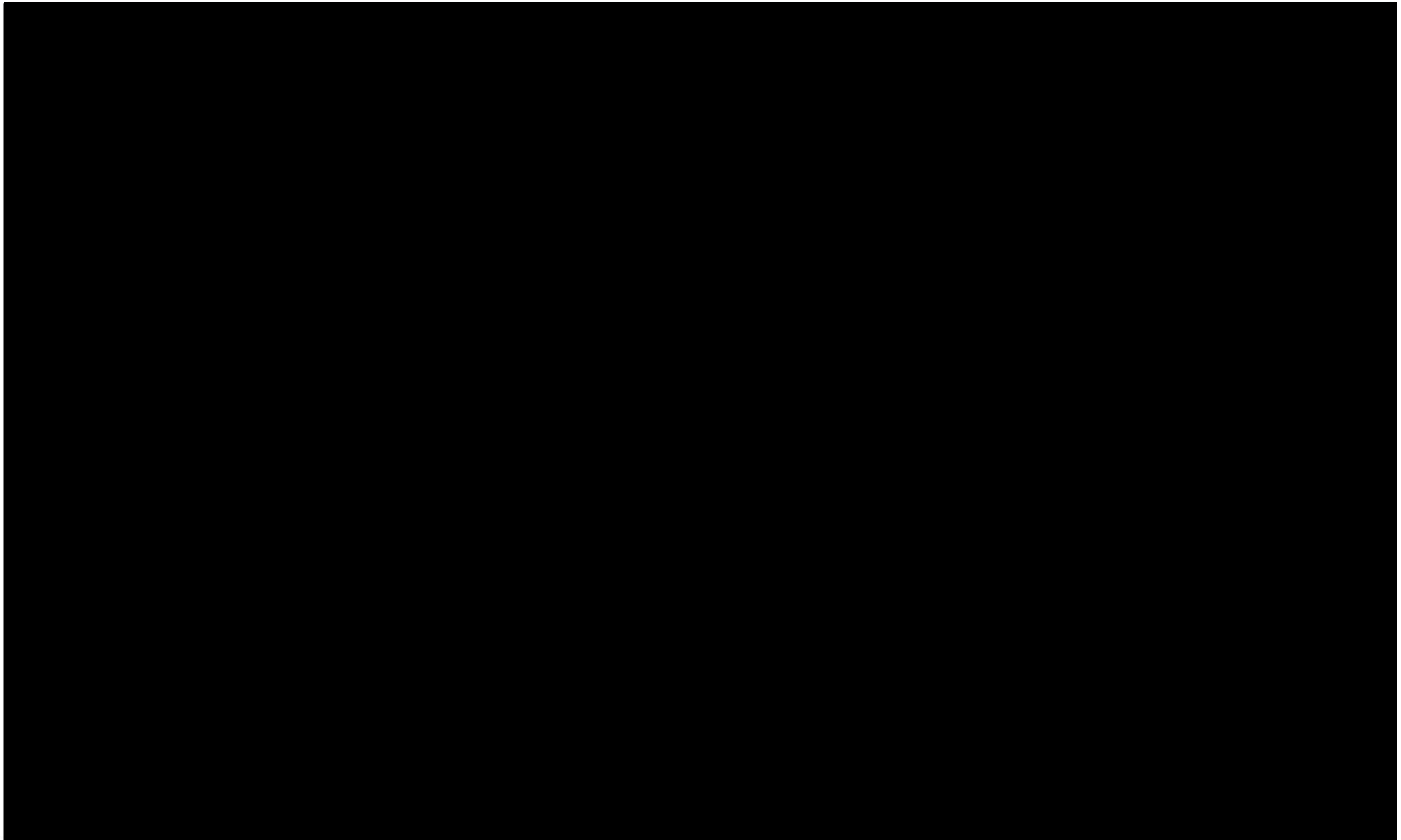
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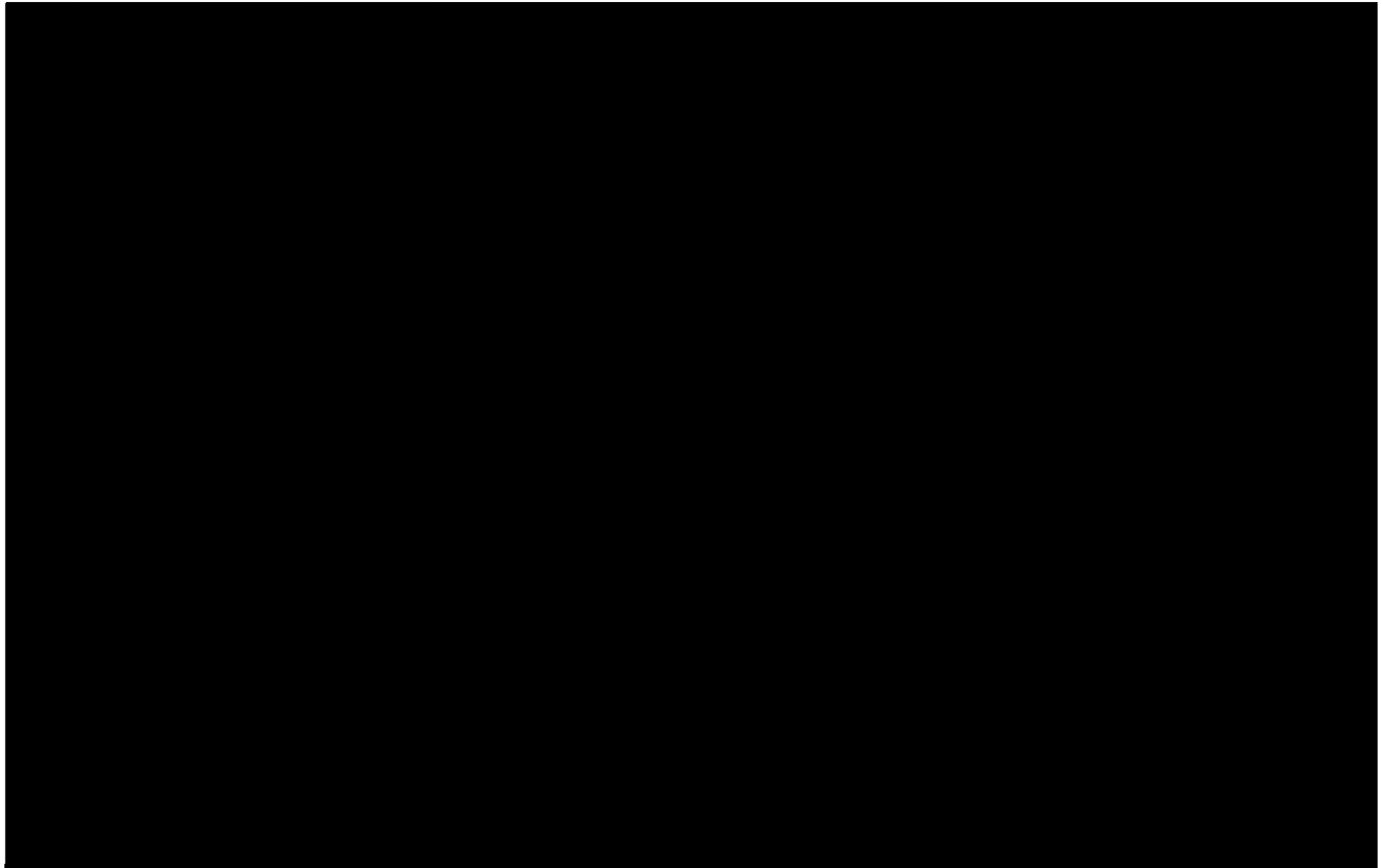
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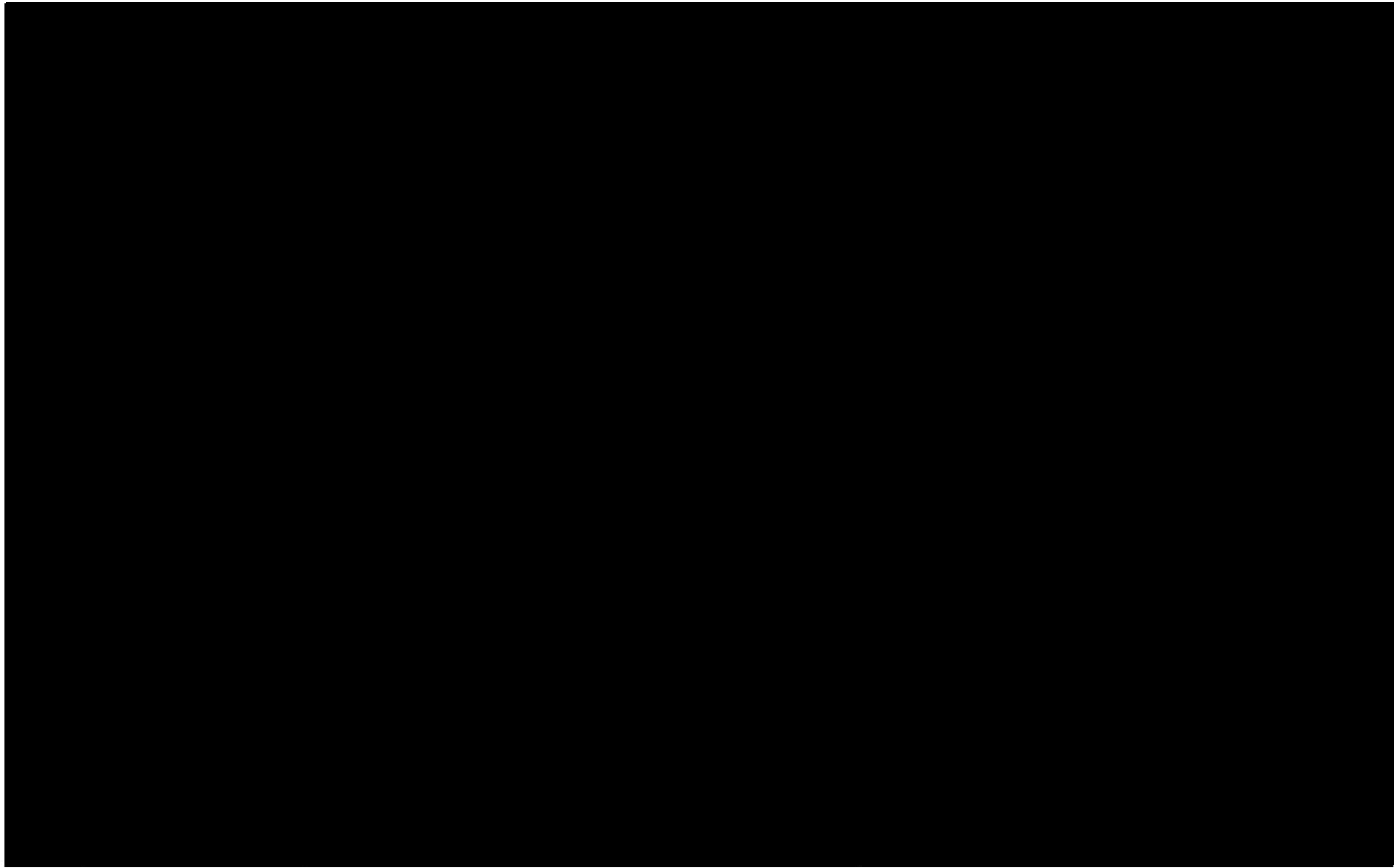
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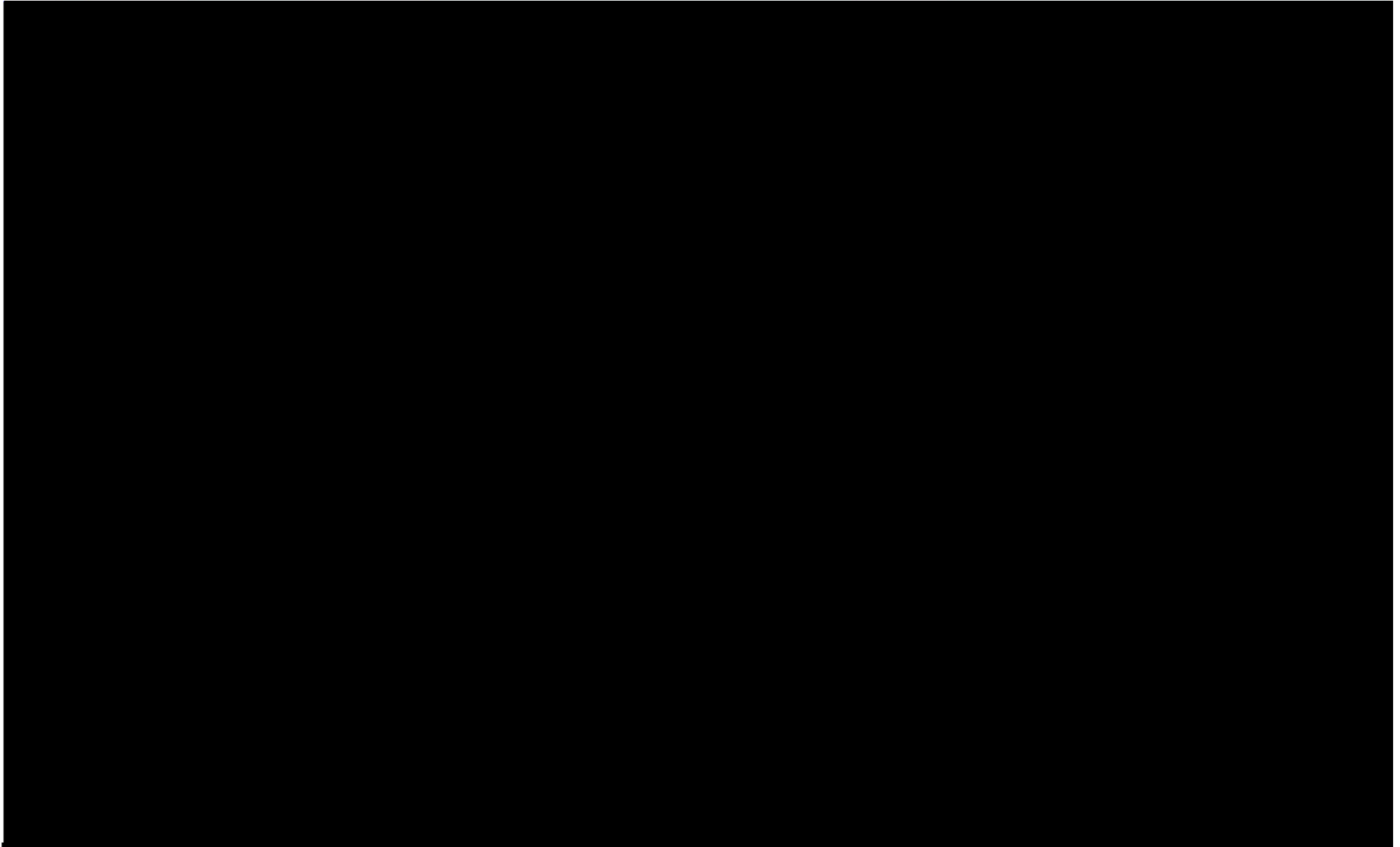
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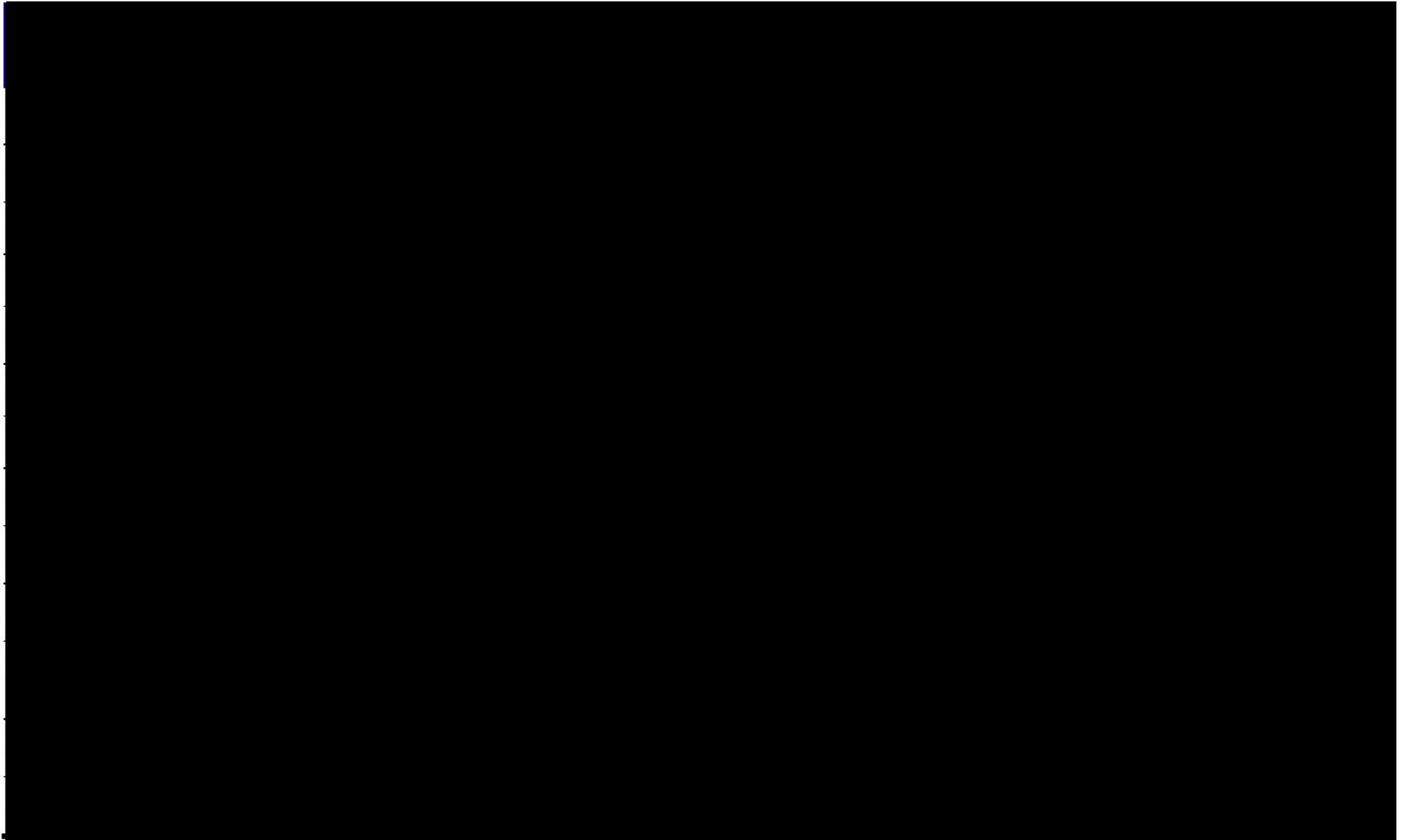
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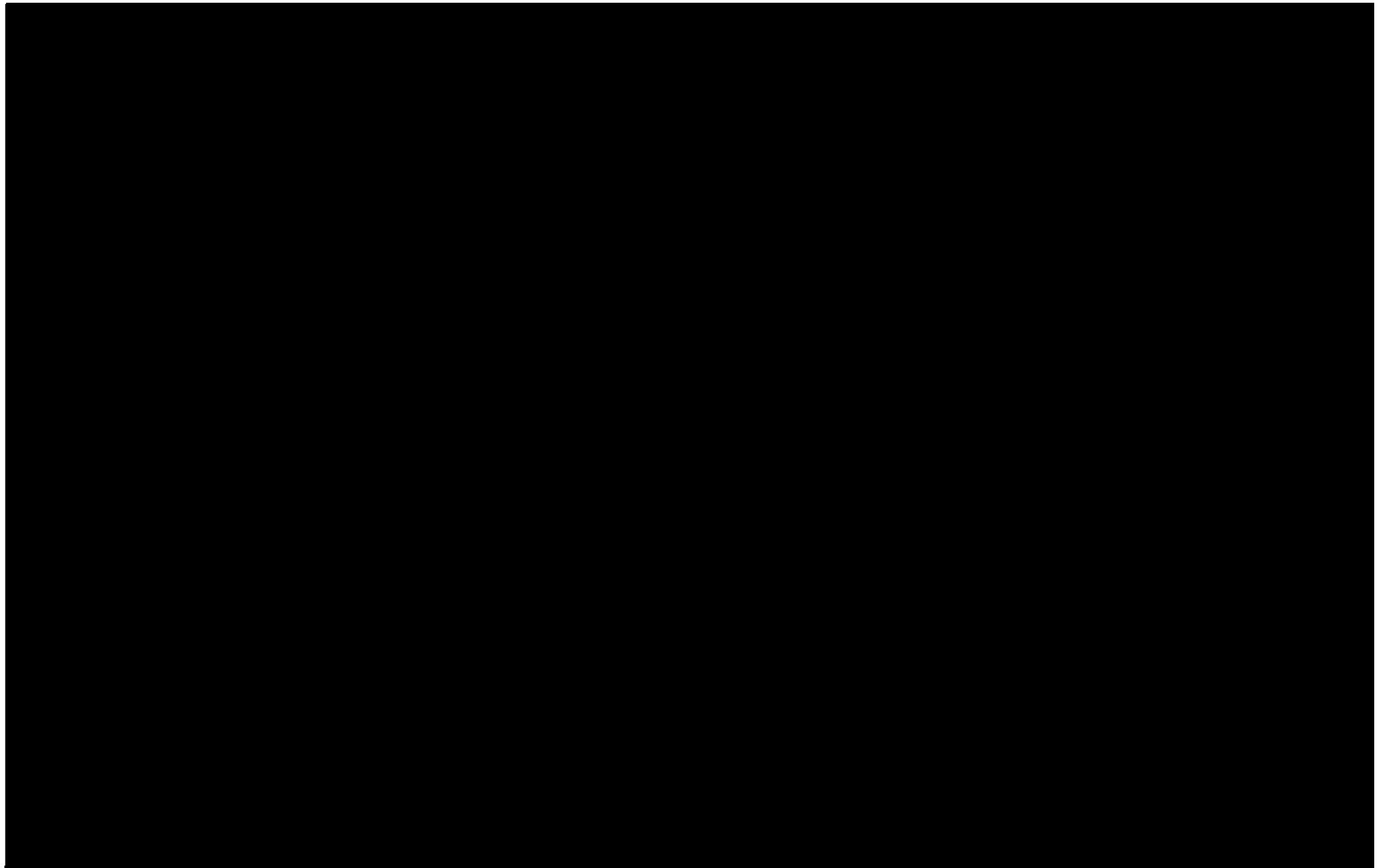
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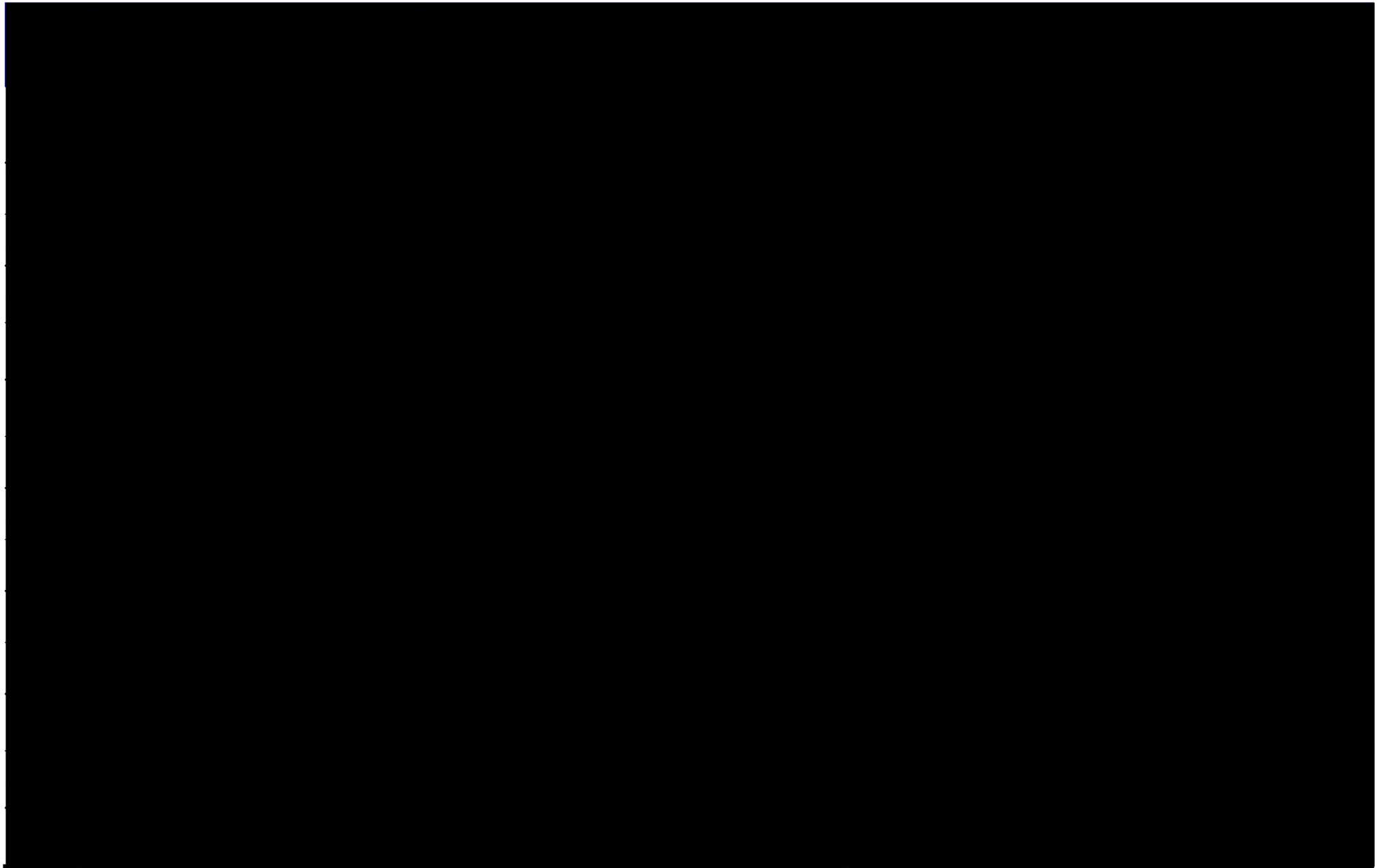
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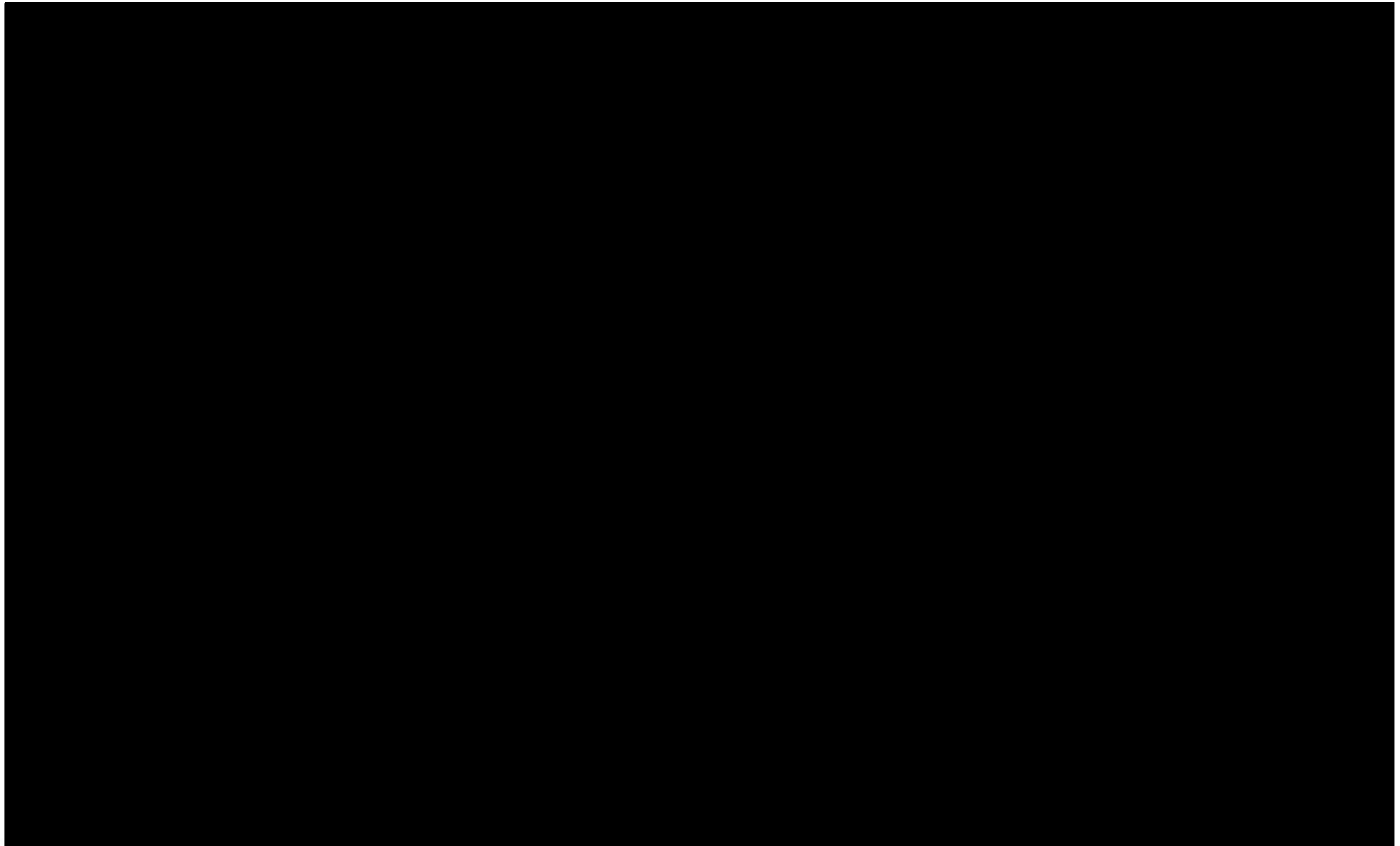
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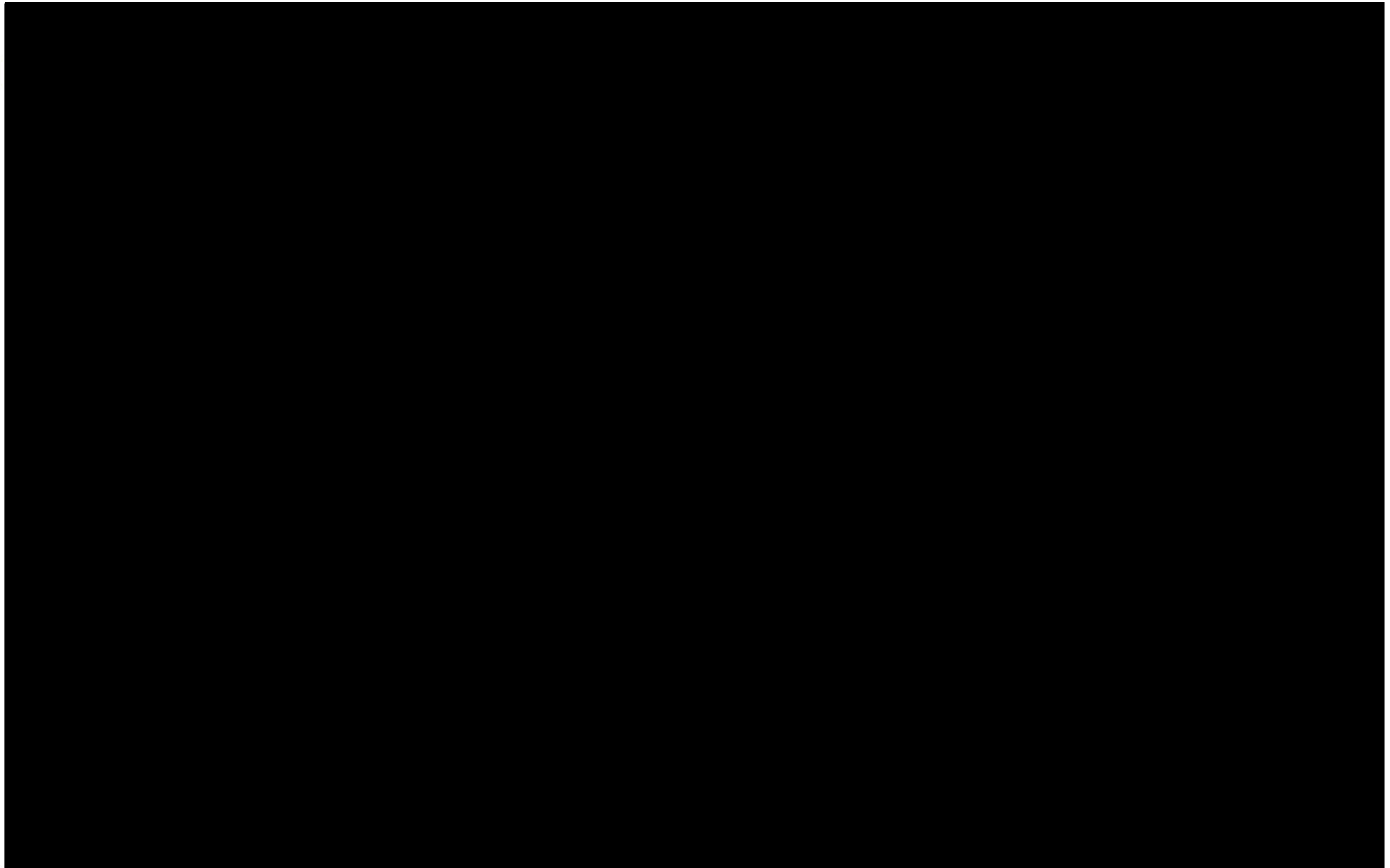
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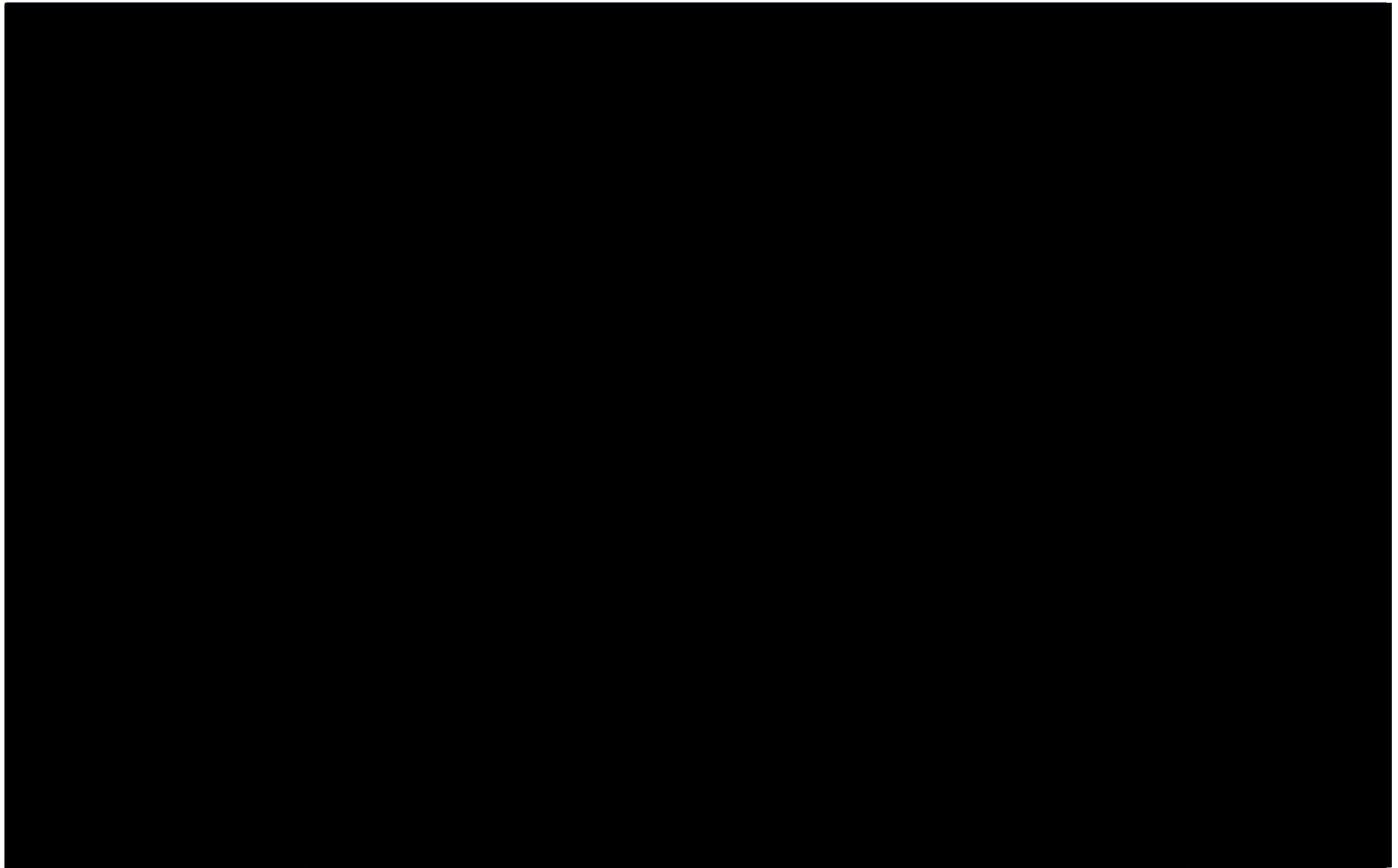
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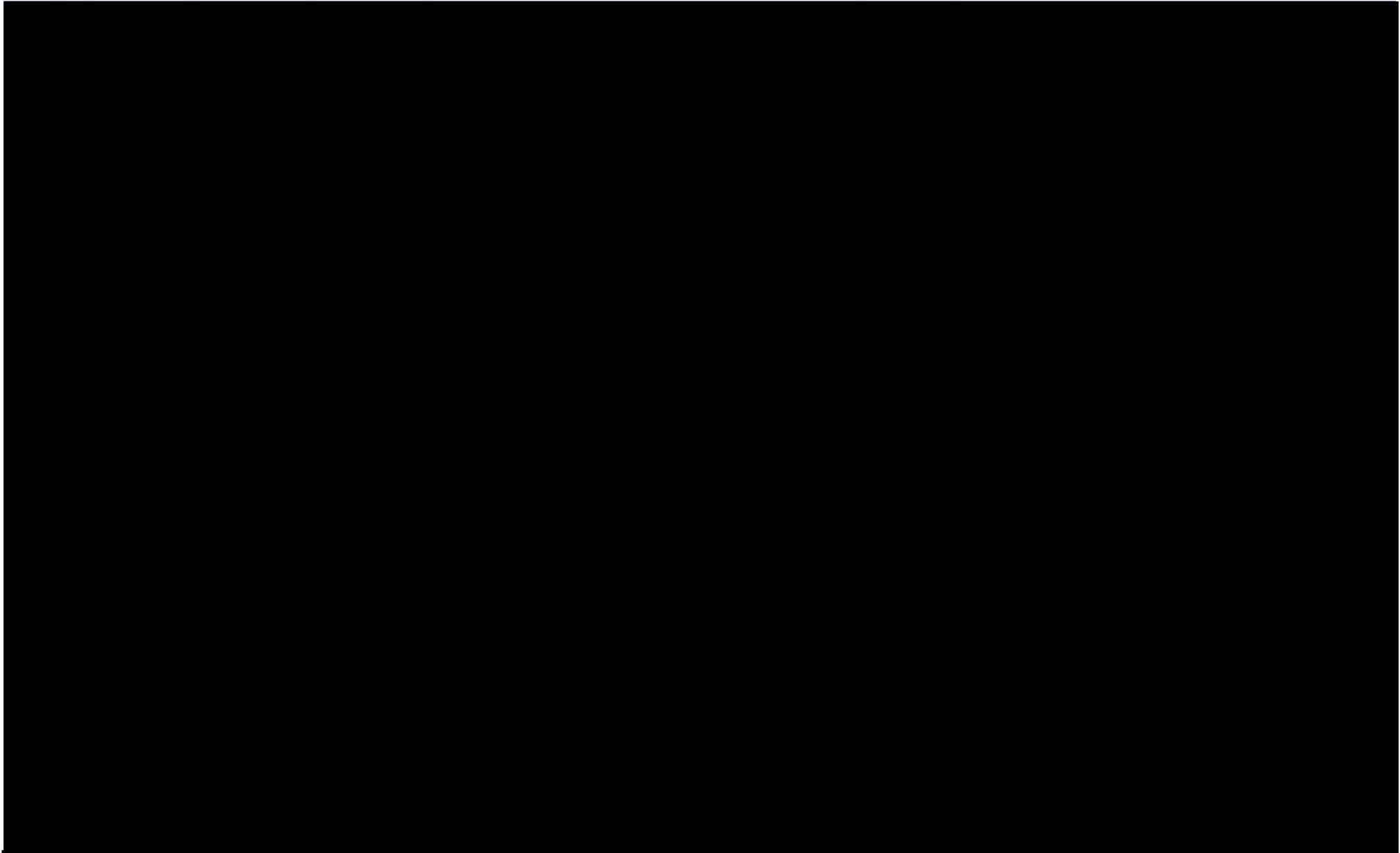
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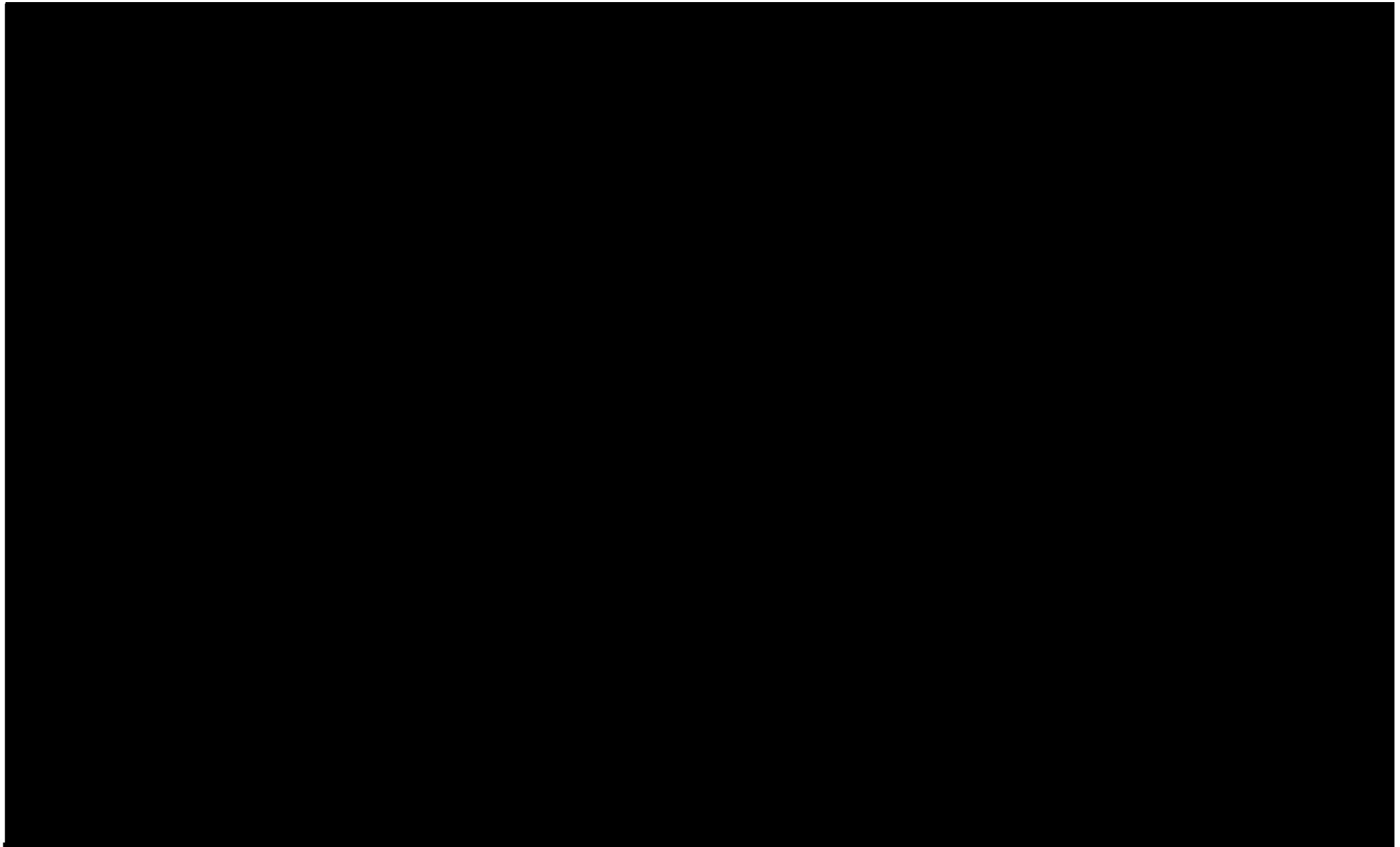
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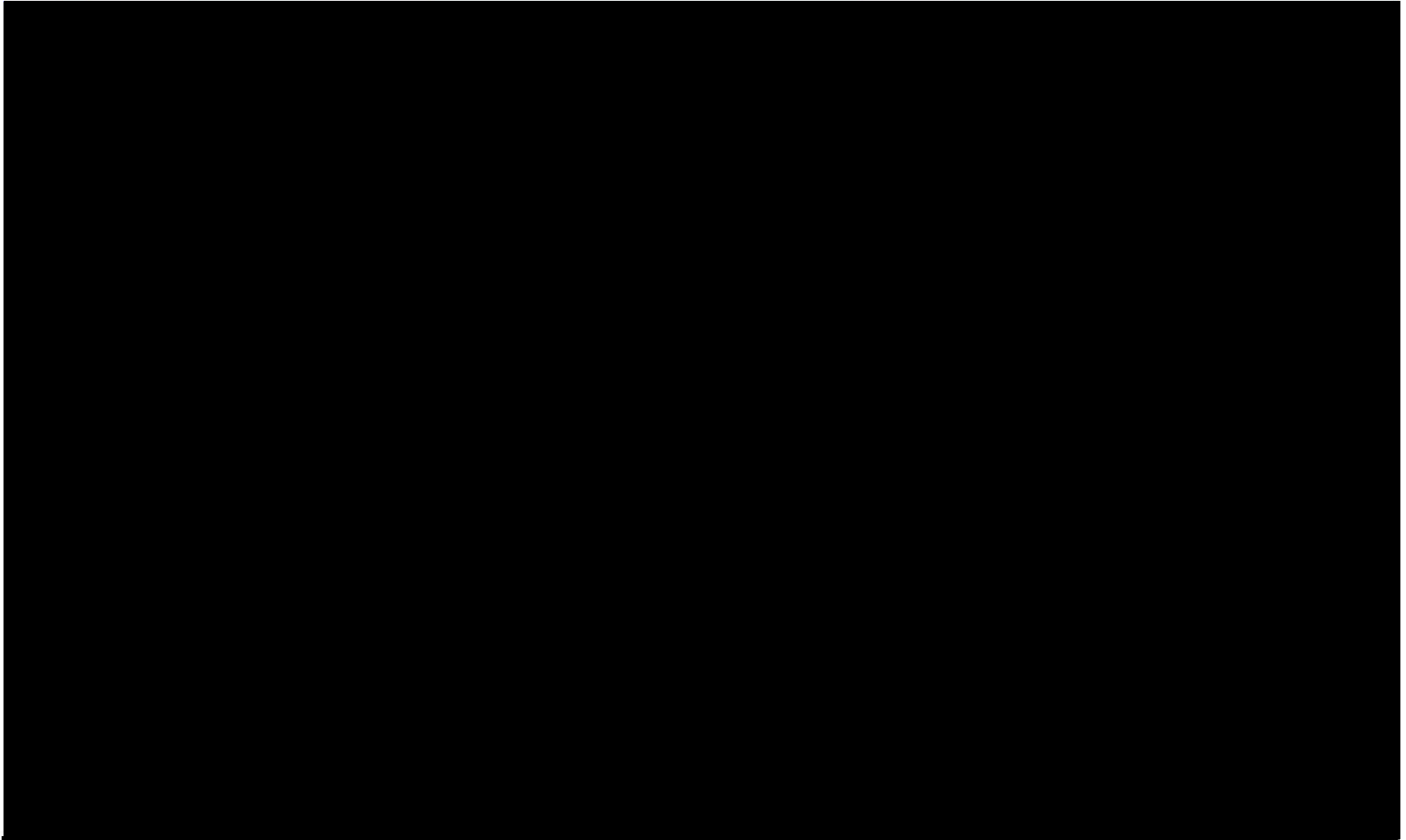
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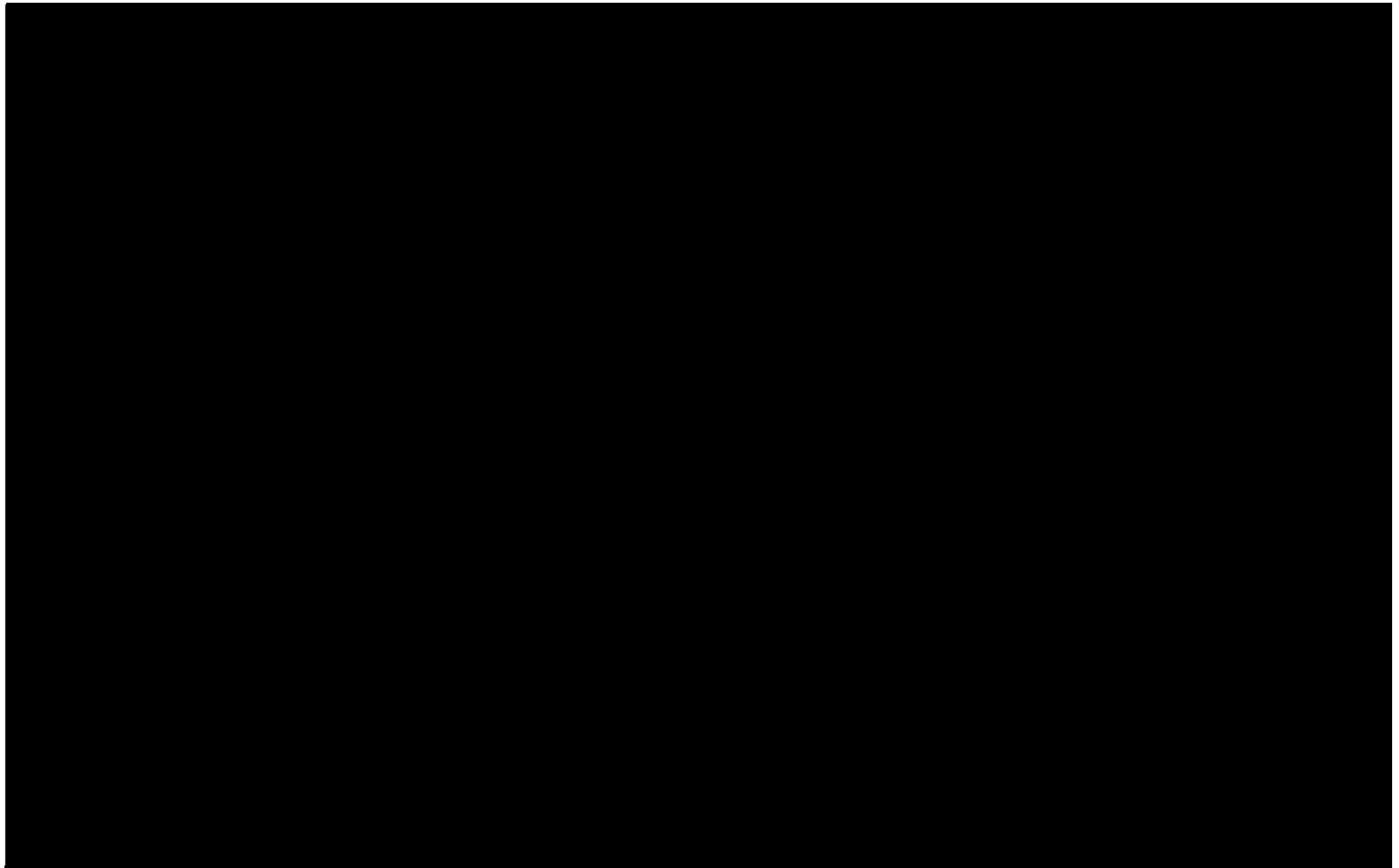
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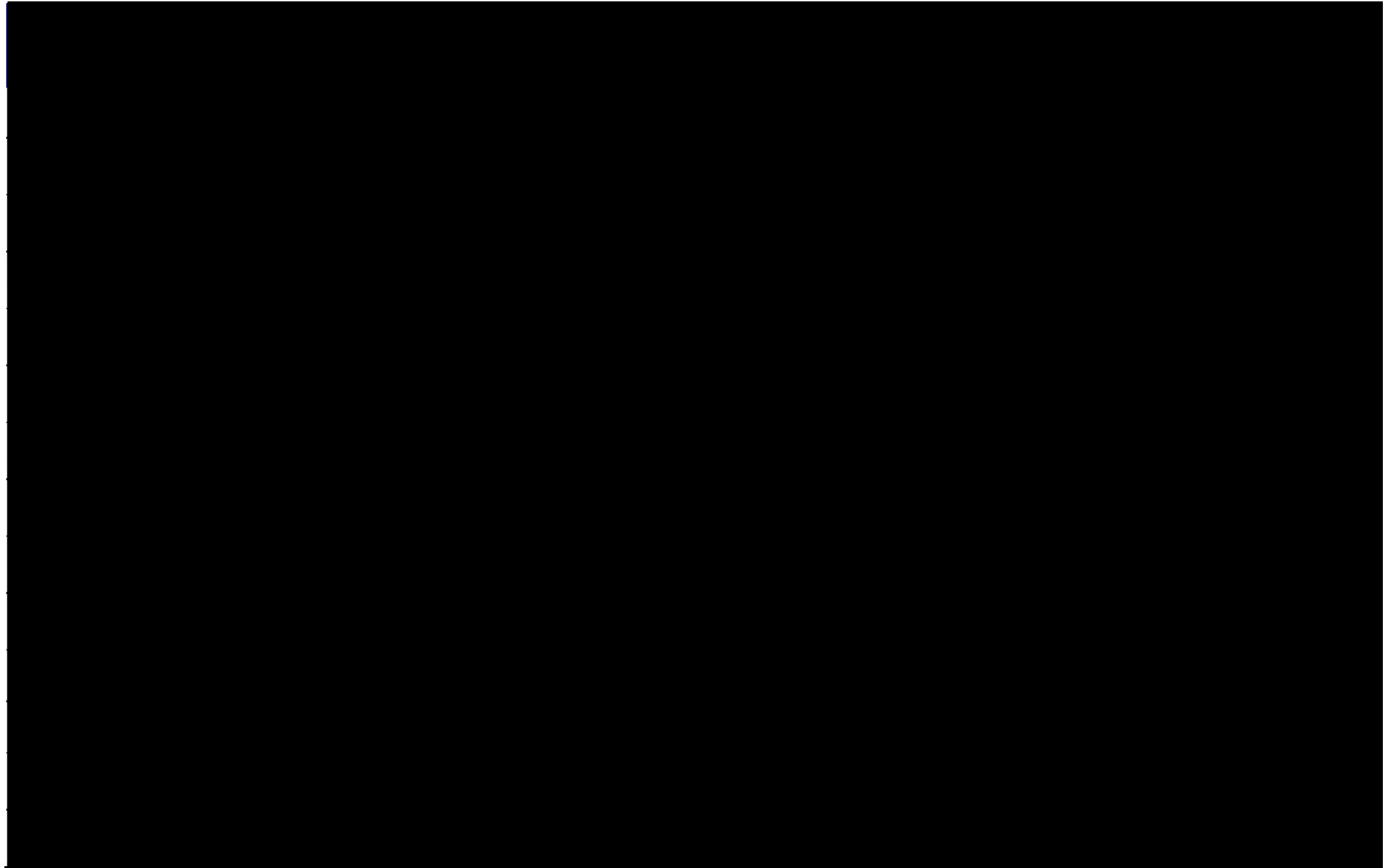
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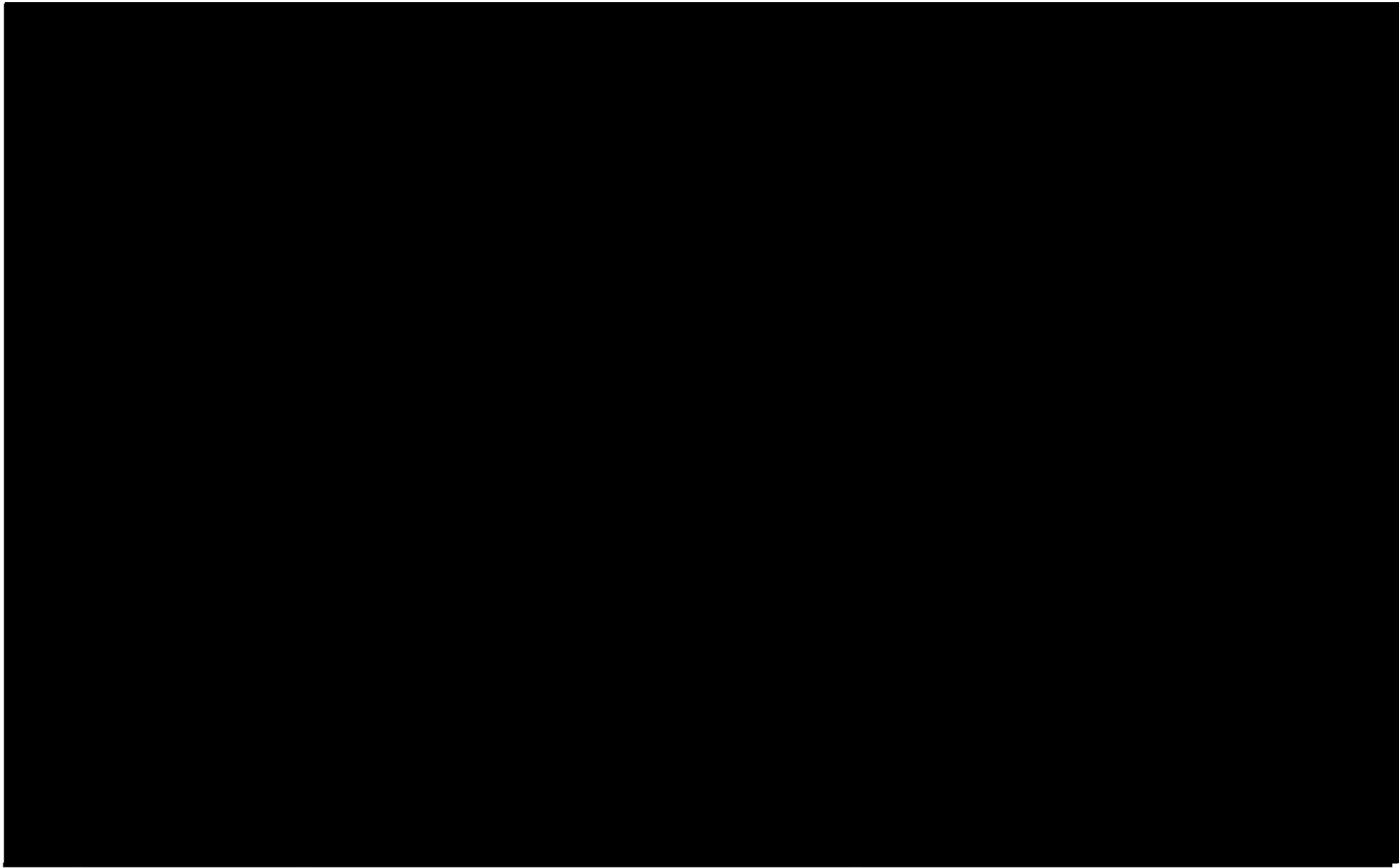
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