

**Analysis of
Open Skies Media Processing Facility
Original Negative Films for
Infrared Fog Sensitivity**

August, 1999

Eastman Kodak Company
Commercial and Government Systems Division
Rochester, NY

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Original Negative Films for
Infrared Fog Sensitivity**

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(Gail Menchey)

Date: 8/23/99

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1. Introduction

This report summarizes the results of an analysis of the Open Skies Media Processing Facility original negative films for Infrared fog sensitivity. The analysis was conducted in a similar manner as a study conducted on AviPhot 200 PE1 film (reported in March 1999). The films were exposed on the 1-B sensitometer, aged for 7 days and frozen for storage prior to use. The latent image step tablets were then exposed for fixed time increments, using a 25-watt beehive safelight, with a #11 safelight filter at a fixed distance. Two step tablets were exposed per time increment, with half of the wedges masked to the safelight exposure.

2. Films Evaluated:

Kodak Tri-X Aerecon Film SO-050 batch # 0023

Kodak Plus-X Aerecon II Film 3404 batch # 0641

Kodak Panatomic-X Aerecon II Film 3412 batch # 1661

3. Procedure

A test bench with a black work surface was set-up in a position directly below a beehive safelight configured with a 25-watt bulb and a No. 11 filter. The distance from the test bench surface to the beehive safelight was four feet.

The film samples were exposed using Kodak's 1B sensitometer and aged for seven days.

Two latent image wedges of each film type, were placed emulsion up, on the work surface. Half of the latent image step tablet was masked to prevent safelight illumination. The other half was exposed to the safelight illumination. Seven safelight exposure time increments were used for this test for each film type. The exposure time increments are as follows:

5 minutes

15 minutes

30 minutes

1 hour

2 hours

4 hours

8 hours

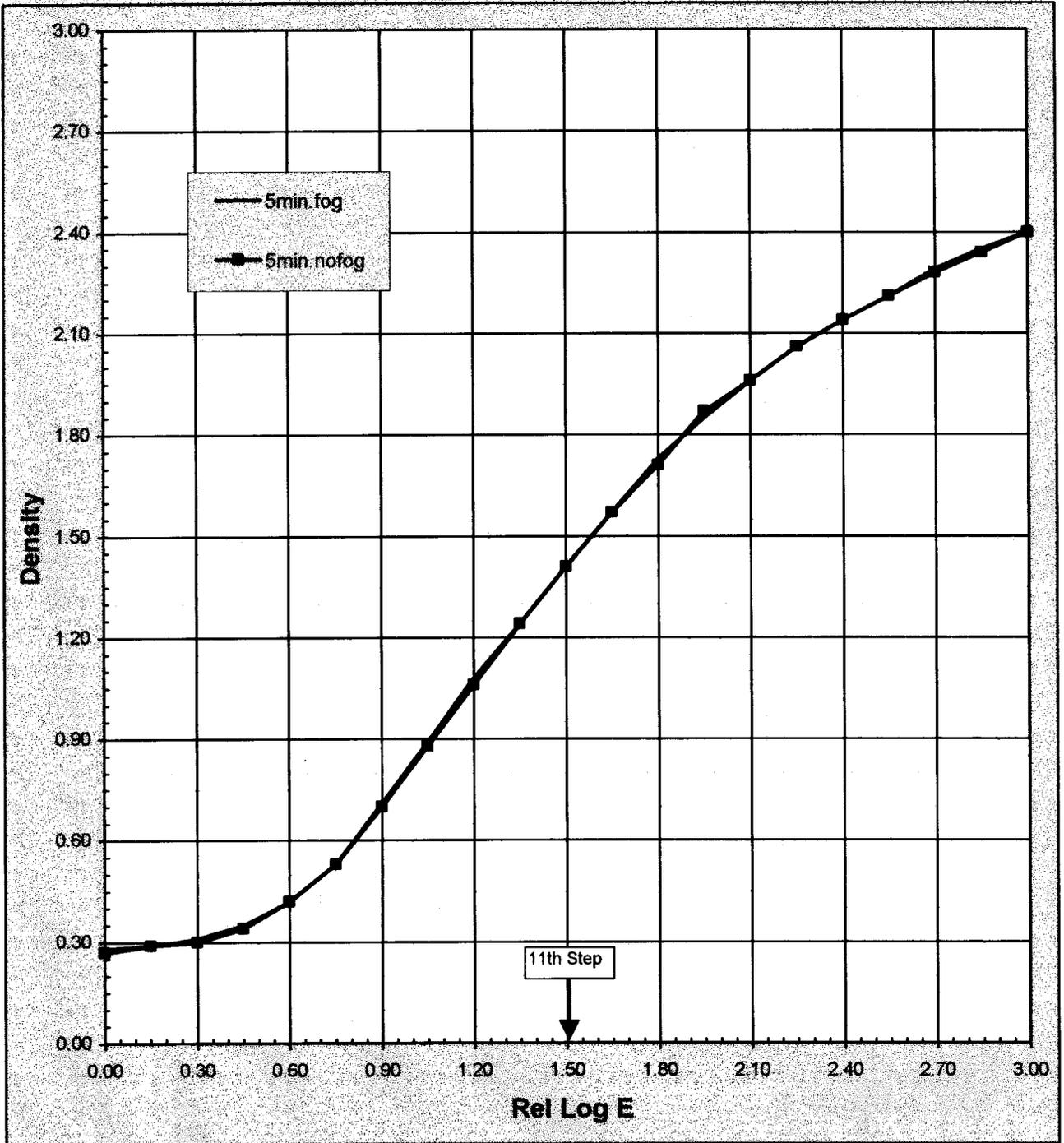
The samples were exposed on the test bench emulsion up. Half of the step wedges exposed were masked from safelight exposure. Two strips were sampled concurrently for data analysis. After each exposure sequence the films were frozen. When all exposure sequences were complete, the samples were assembled and processed in their respective processes. Sensitometric curves were plotted for all films using a densitometer with a Status A Visual filter.

4. Conclusions

The data supports the conclusion that all film types tested are not effected by short-term exposure to spectral illumination from the #11 filter. No effects were noted until a safelight exposure time of 4 hours was performed. The data for the safelight exposure levels of 4 and 8 hours does support a sensitometric exposure level increase. Example: the SO-050 four-hour sample exhibited an increase of approximately 1/3 of a stop in exposure and the SO-050 eight-hour sample exhibited an exposure increase of approximately 1/2 stop at the 11th step. It is logical to assume that this trend would continue with an increase of the exposure time.

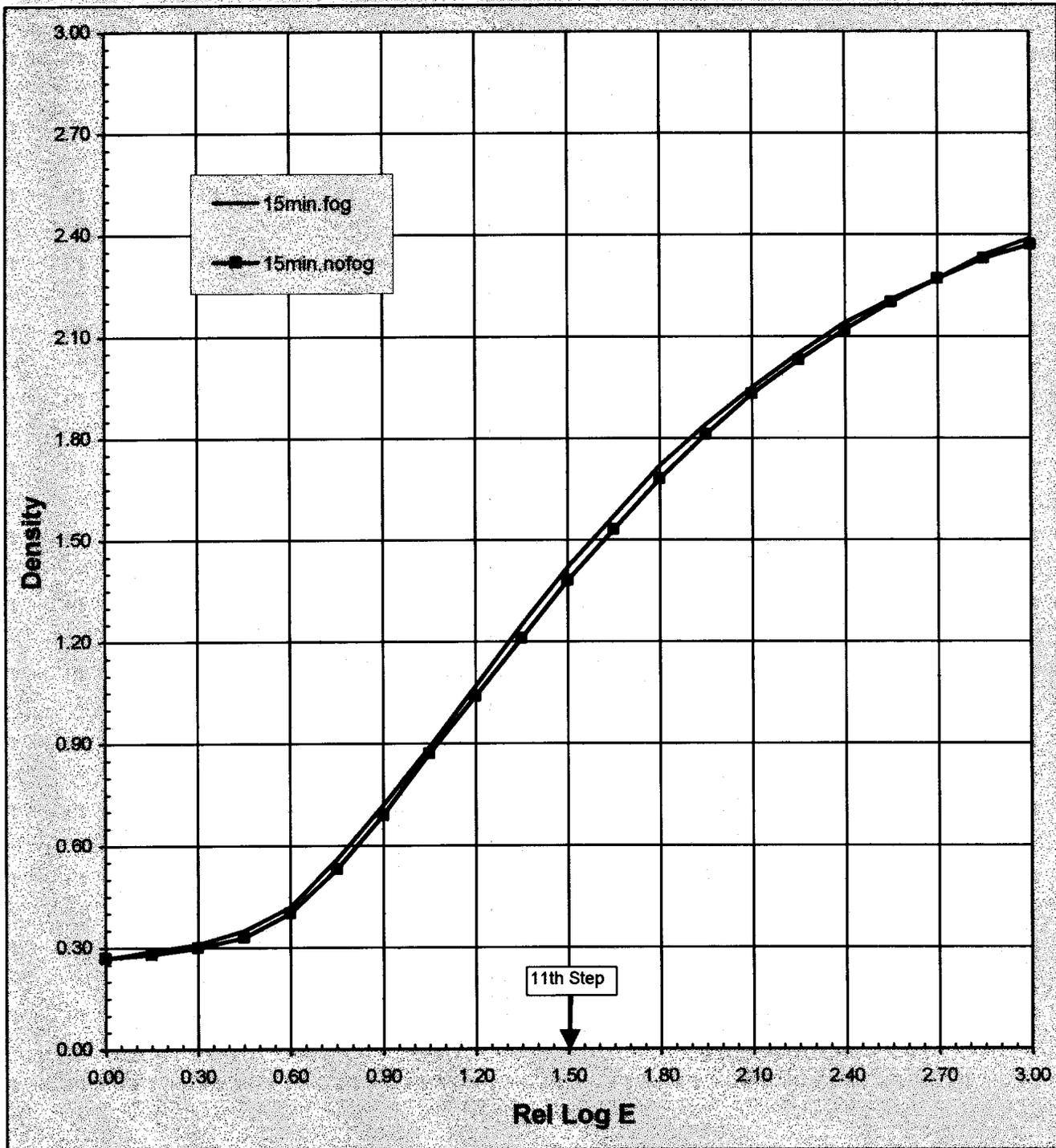
SO-050 Five Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: SO-050-0023
Exposure: 1B, 3000 K (4500 K), D/L + 59 ND, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 103 Degrees, 15 fpm, 2 Racks



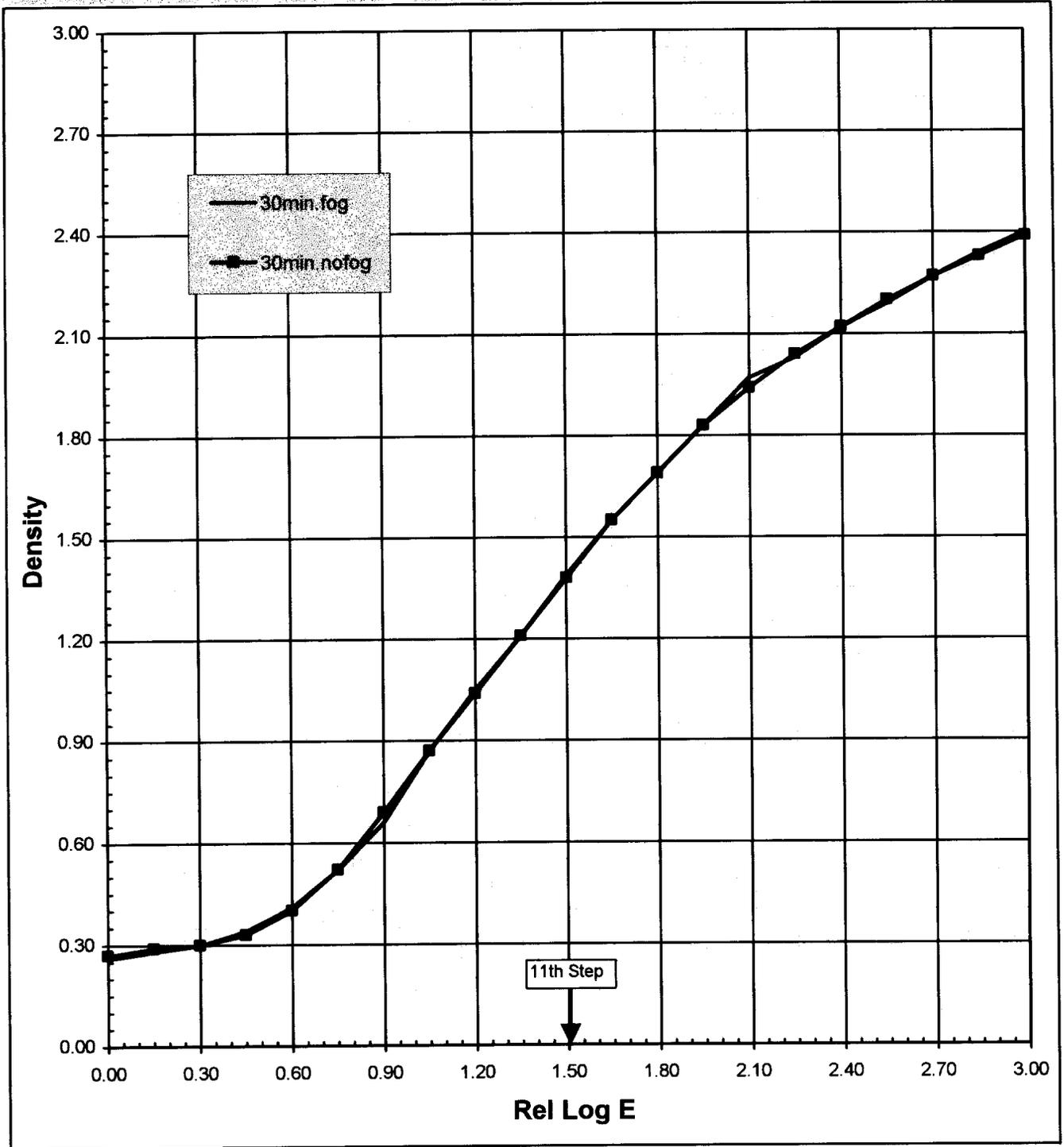
SO-050 Fifteen Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: SO-050-0023
Exposure: 1B, 3000 K (4500 K), D/L + .59 ND, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 103 Degrees, 15 fpm, 2 Racks



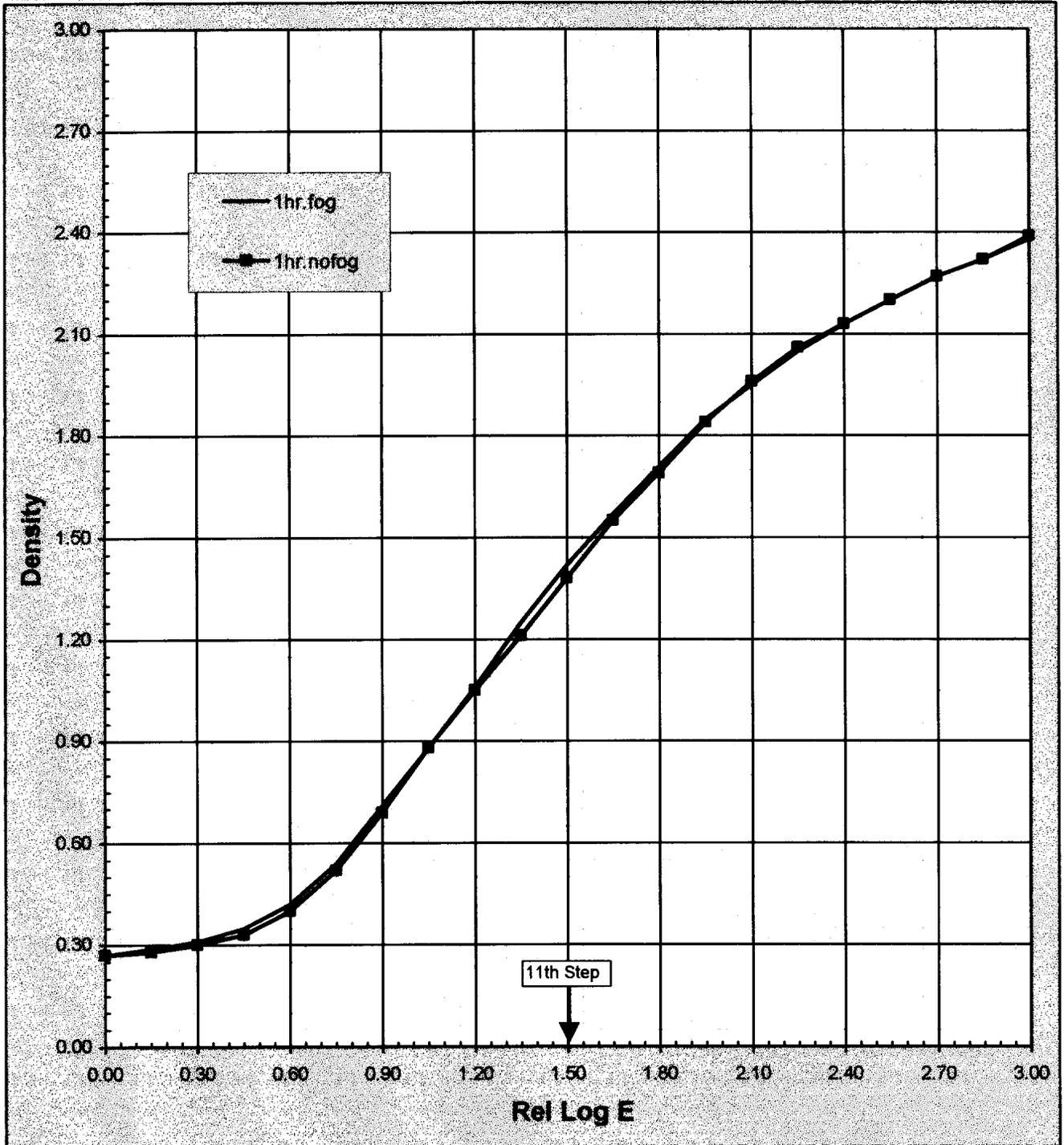
SO-050 Thirty Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: SO-050-0023
Exposure: 1B, 3000 K (4500 K), D/L + .59 ND, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 103 Degrees, 15 fpm, 2 Racks



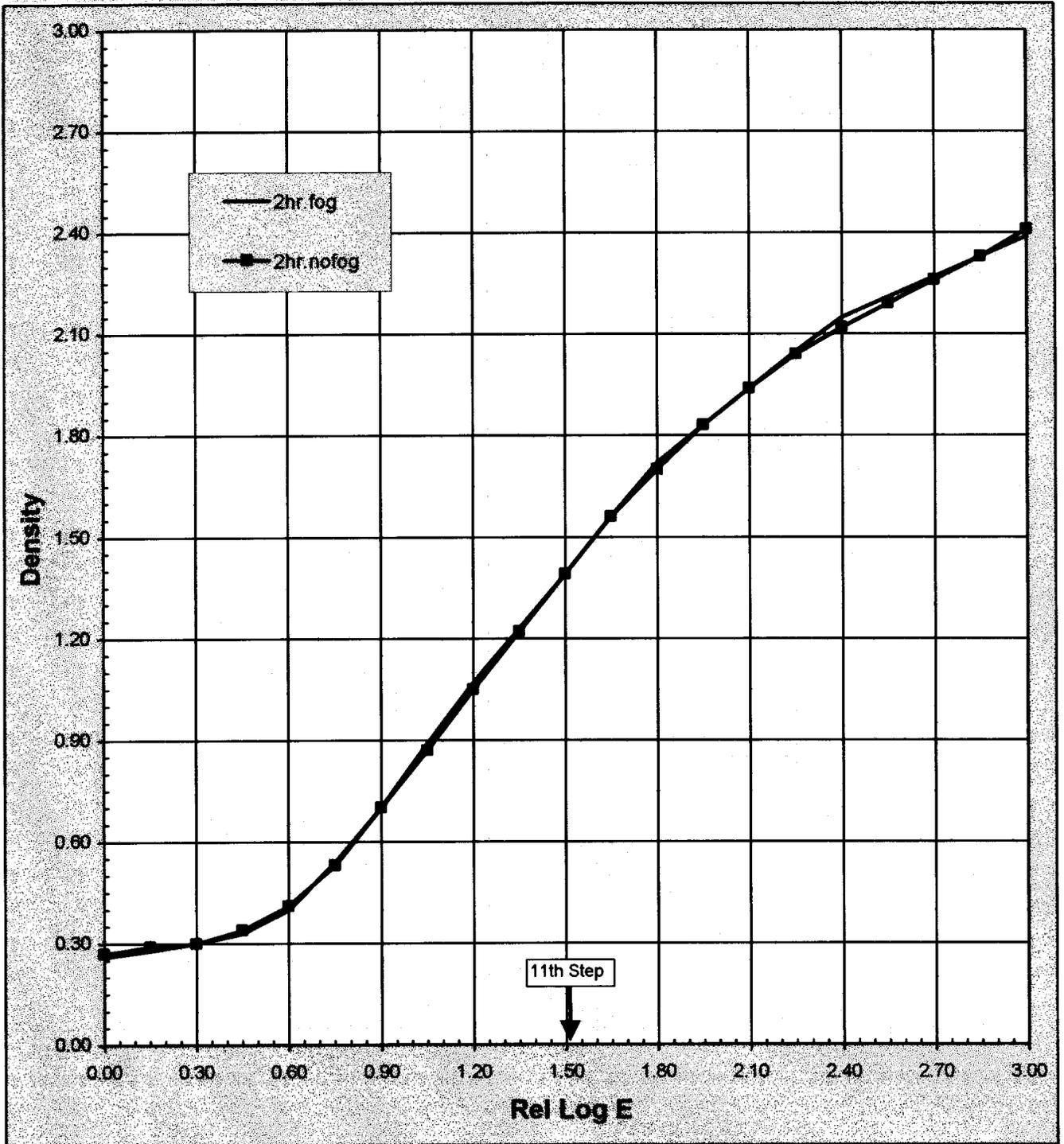
SO-050 One Hour Exposure

Date: 08/02/1999
By: G. Menchey
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Exposure: 1B, 3000 K (4500 K), D/L + .59 ND, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 103 Degrees, 15 fpm, 2 Racks



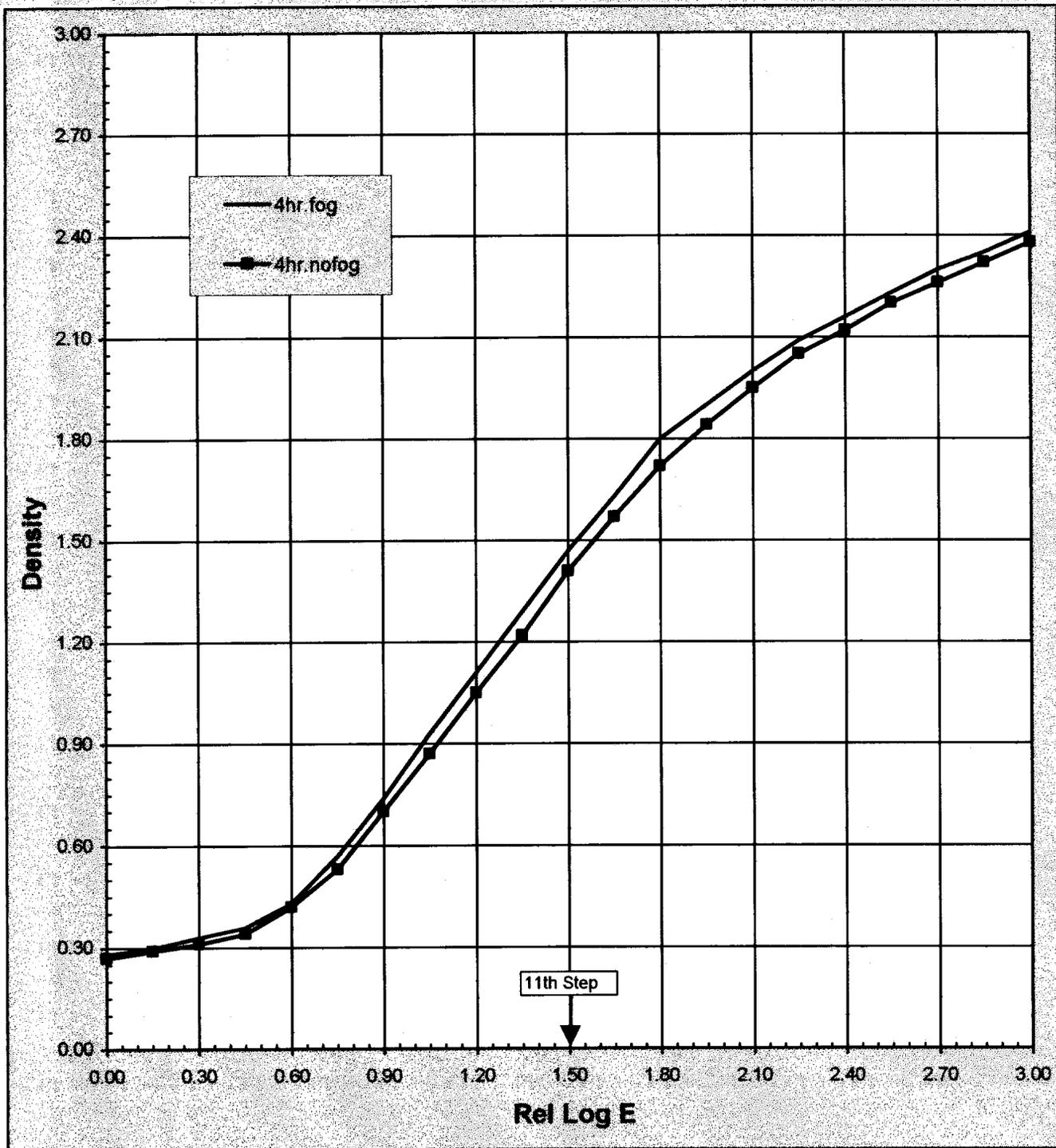
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Exposure: 1B, 3000 K (4500 K), D/L + .59 ND, 1/100 Second
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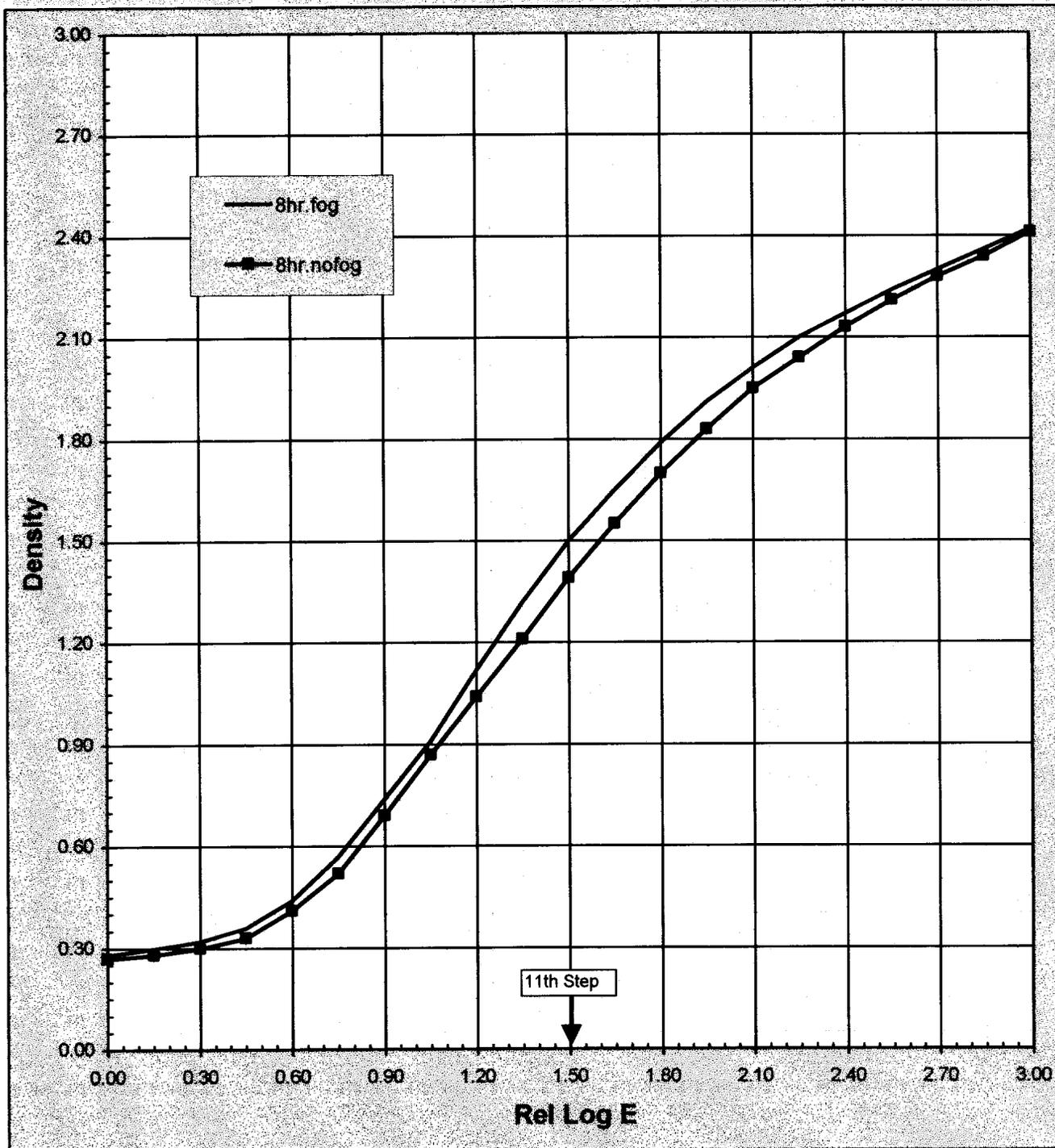
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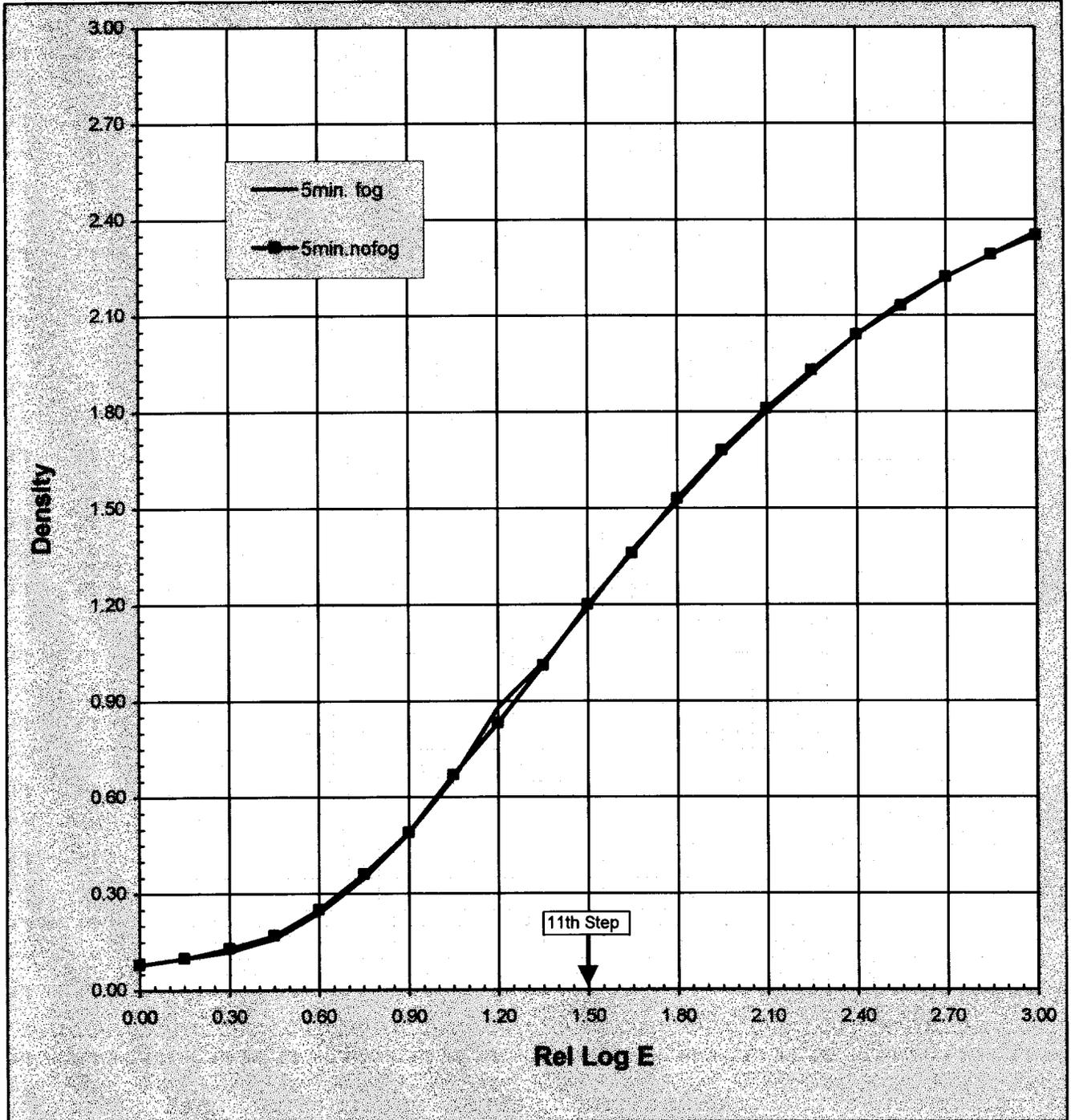
SO-050 Eight Hour Exposure

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By: G. Menchey
Feature Film: SO-050-0023
Exposure: 1B, 3000 K (4500 K), D/L + .59 ND, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 103 Degrees, 15 fpm, 2 Racks



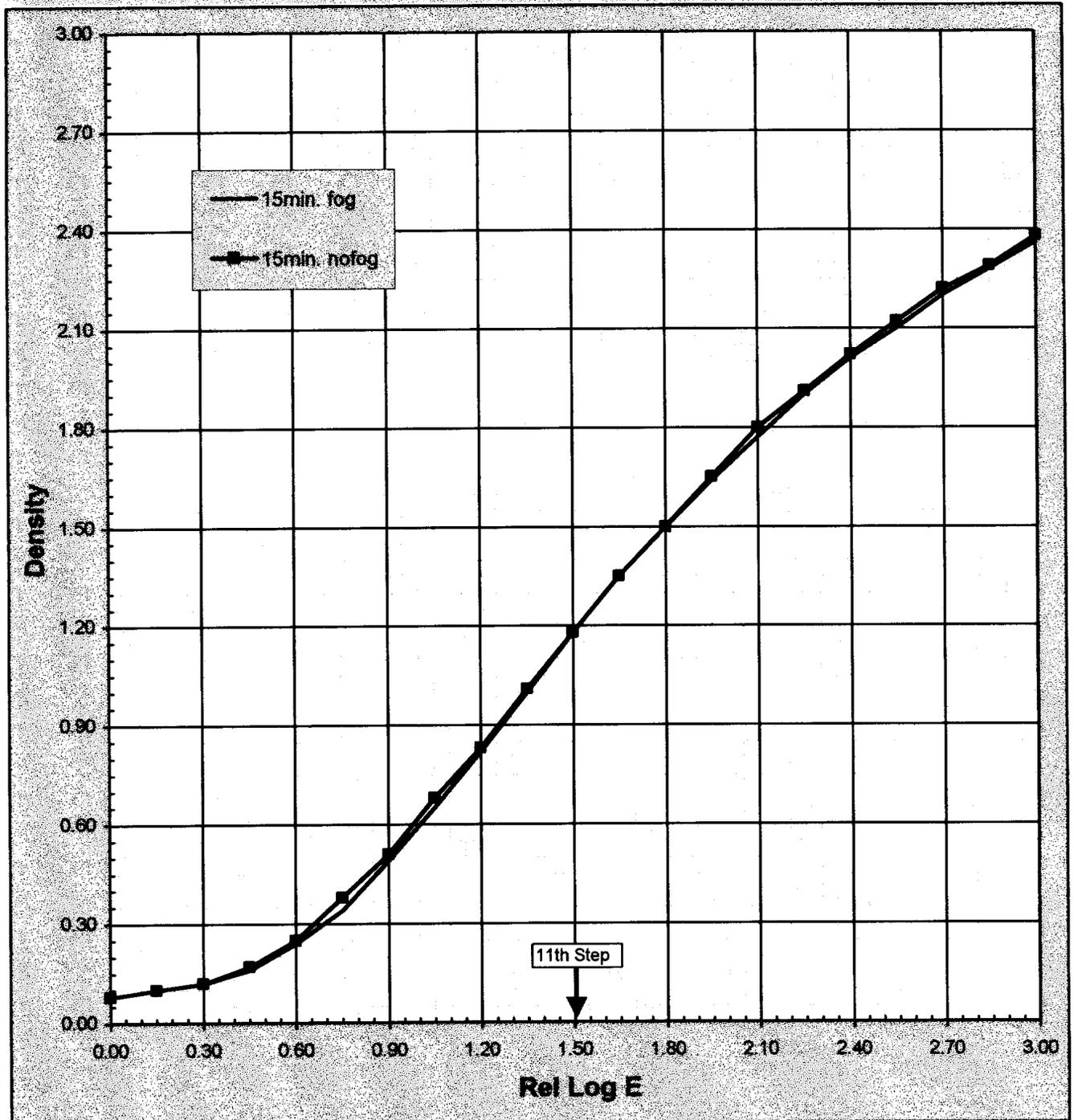
3404 Five Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 100 Degrees, 29 fpm, 2 Racks



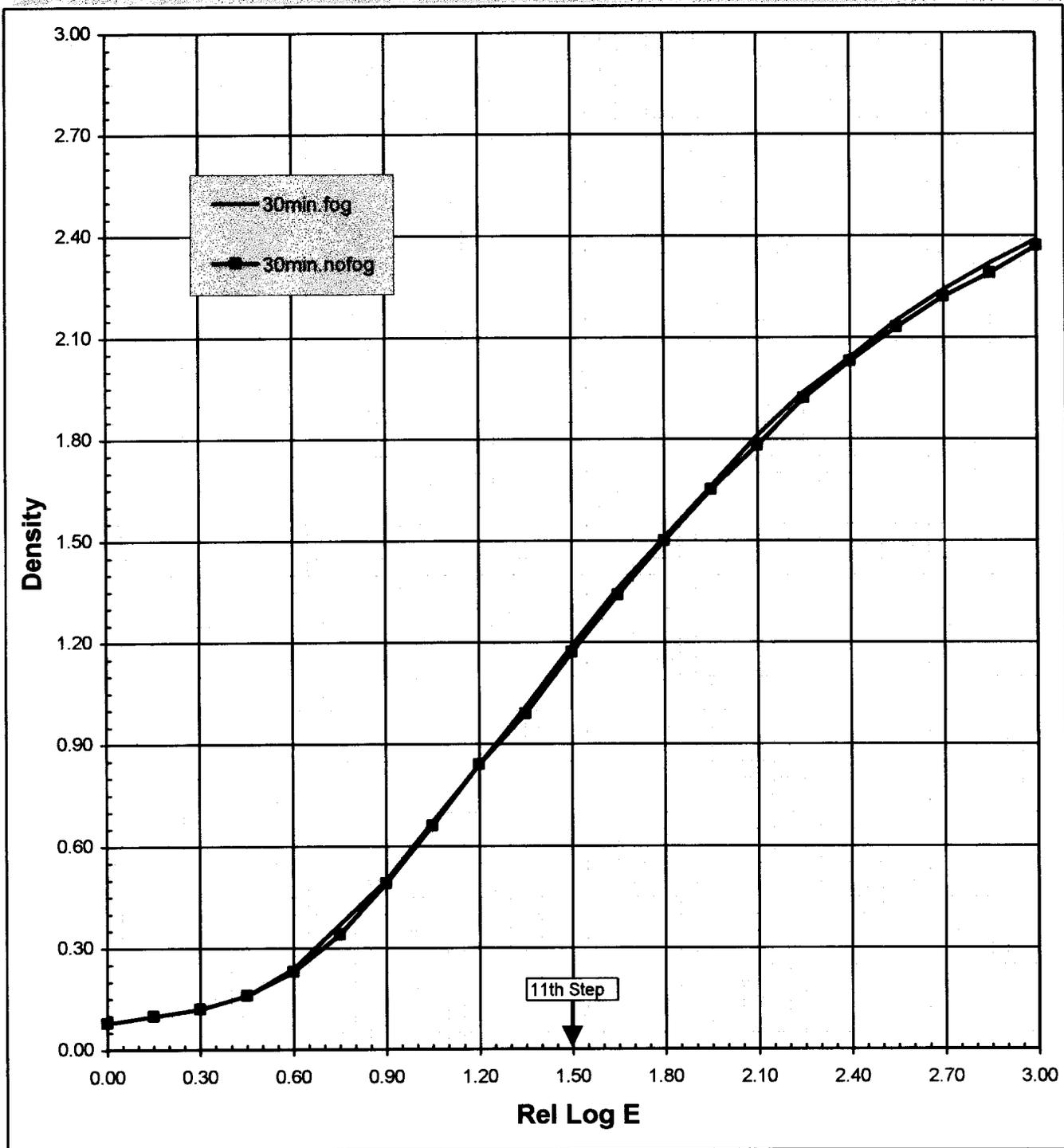
3404 Fifteen Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 100 Degrees, 29 fpm, 2 Racks



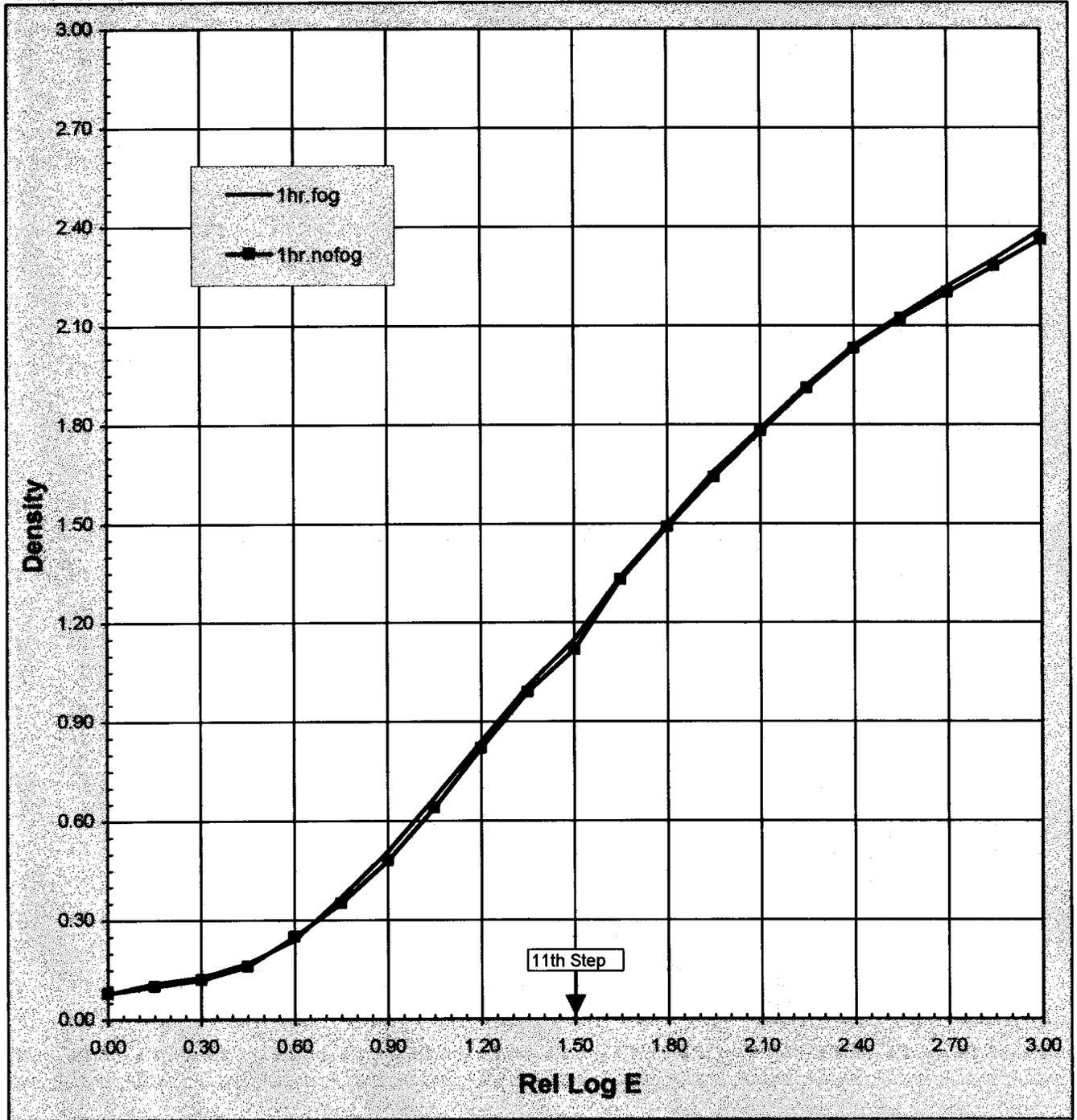
3404 Thirty Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 100 Degrees, 29 fpm, 2 Racks

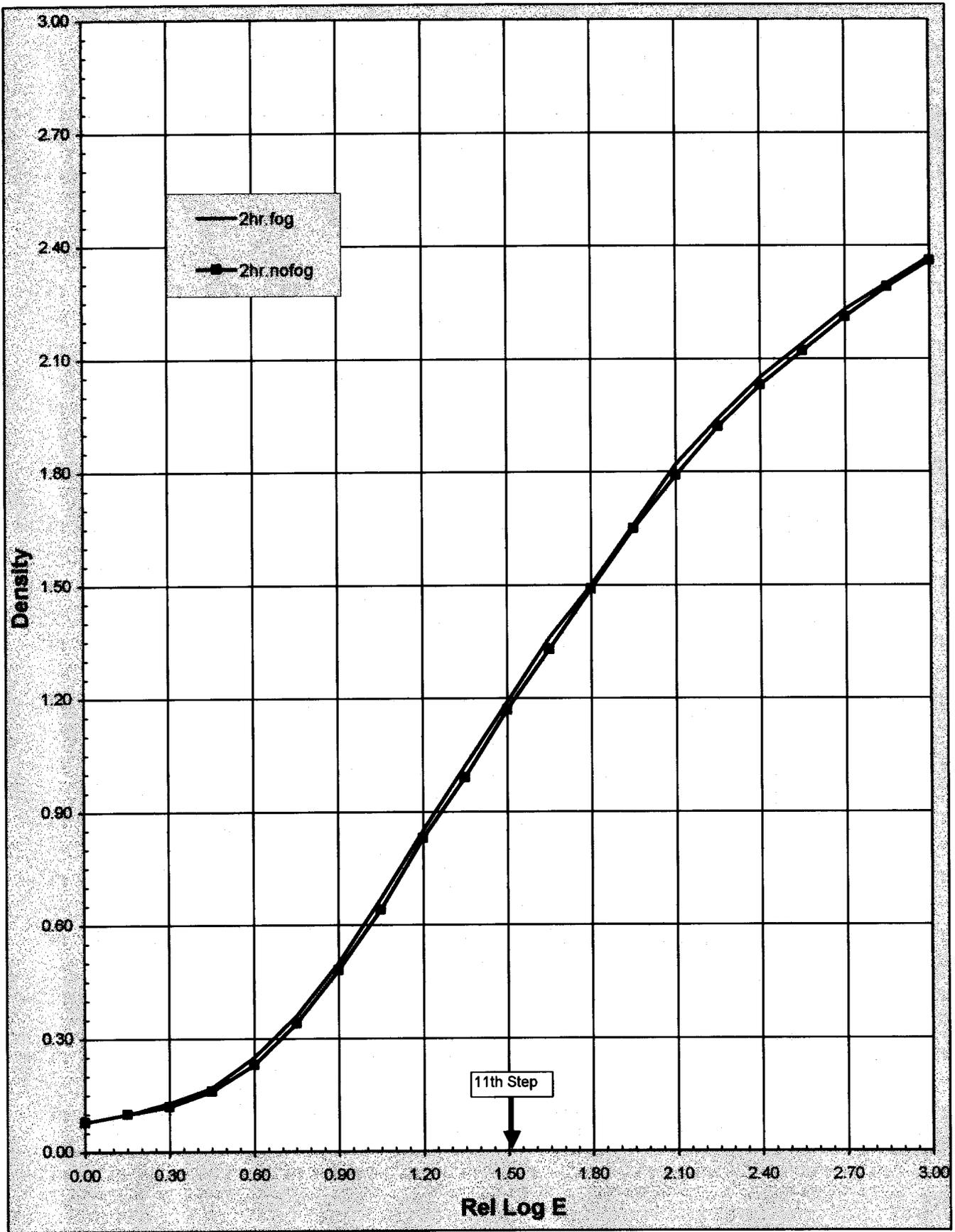


3404 One Hour Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/100 Second
Process: VERSAMAT 1140, 641 Developer, 100 Degrees, 29 fpm, 2 Racks

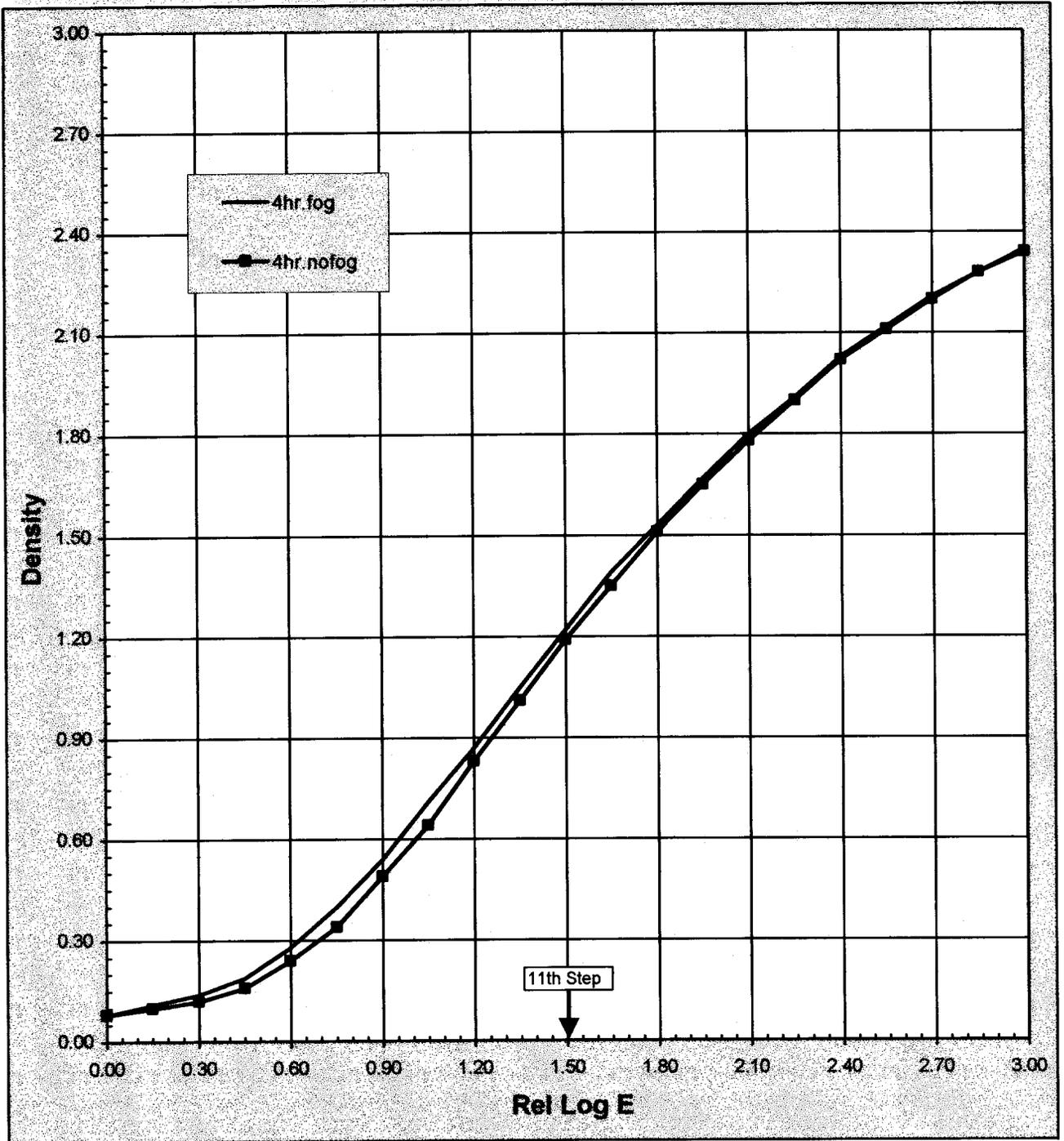


3404 Two Hour
Exposure



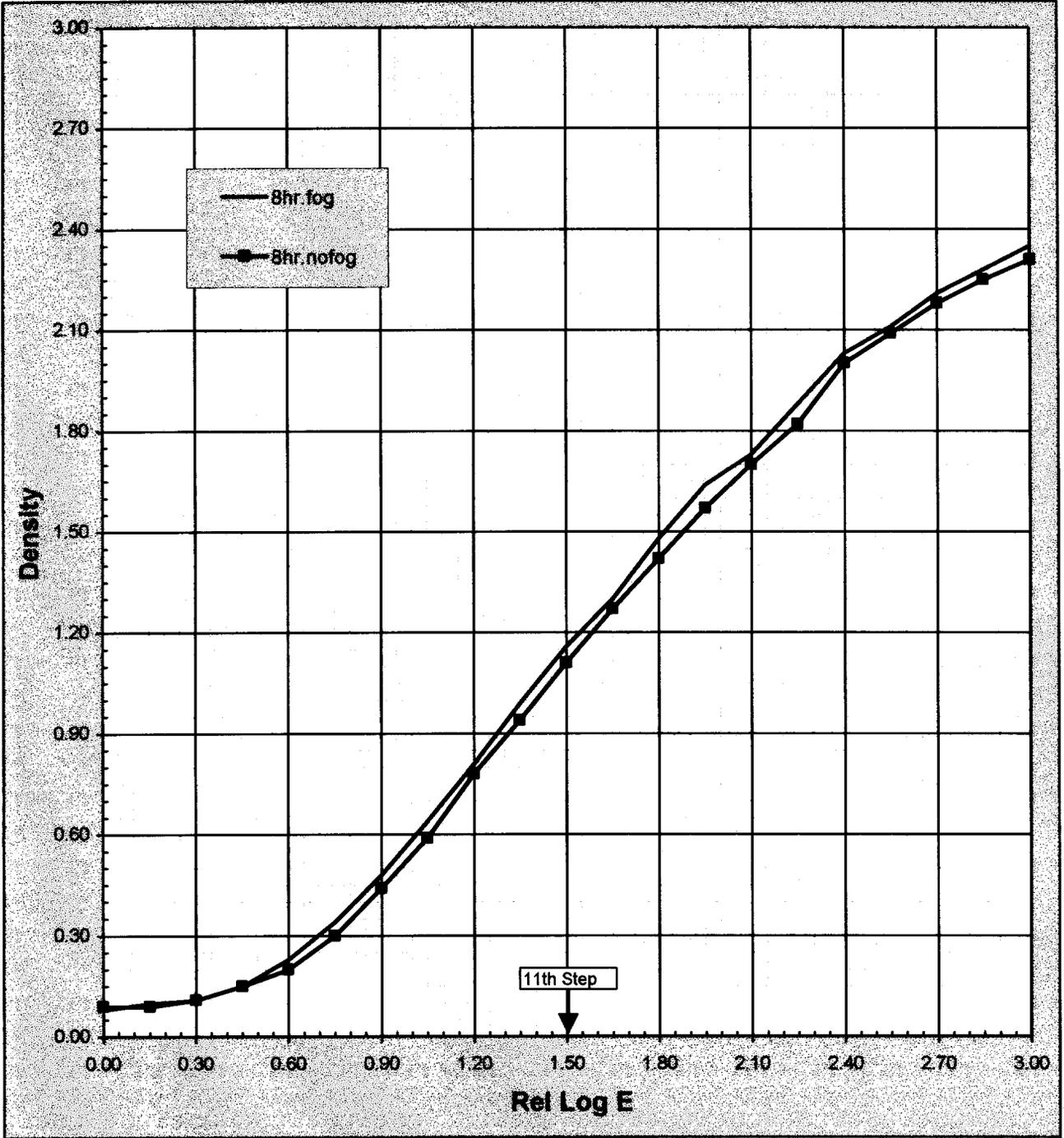
3404 Four Hour Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/10 Second
Process: VERSAMAT 1140, 641 Developer, 100 Degrees, 29 fpm, 2 Racks



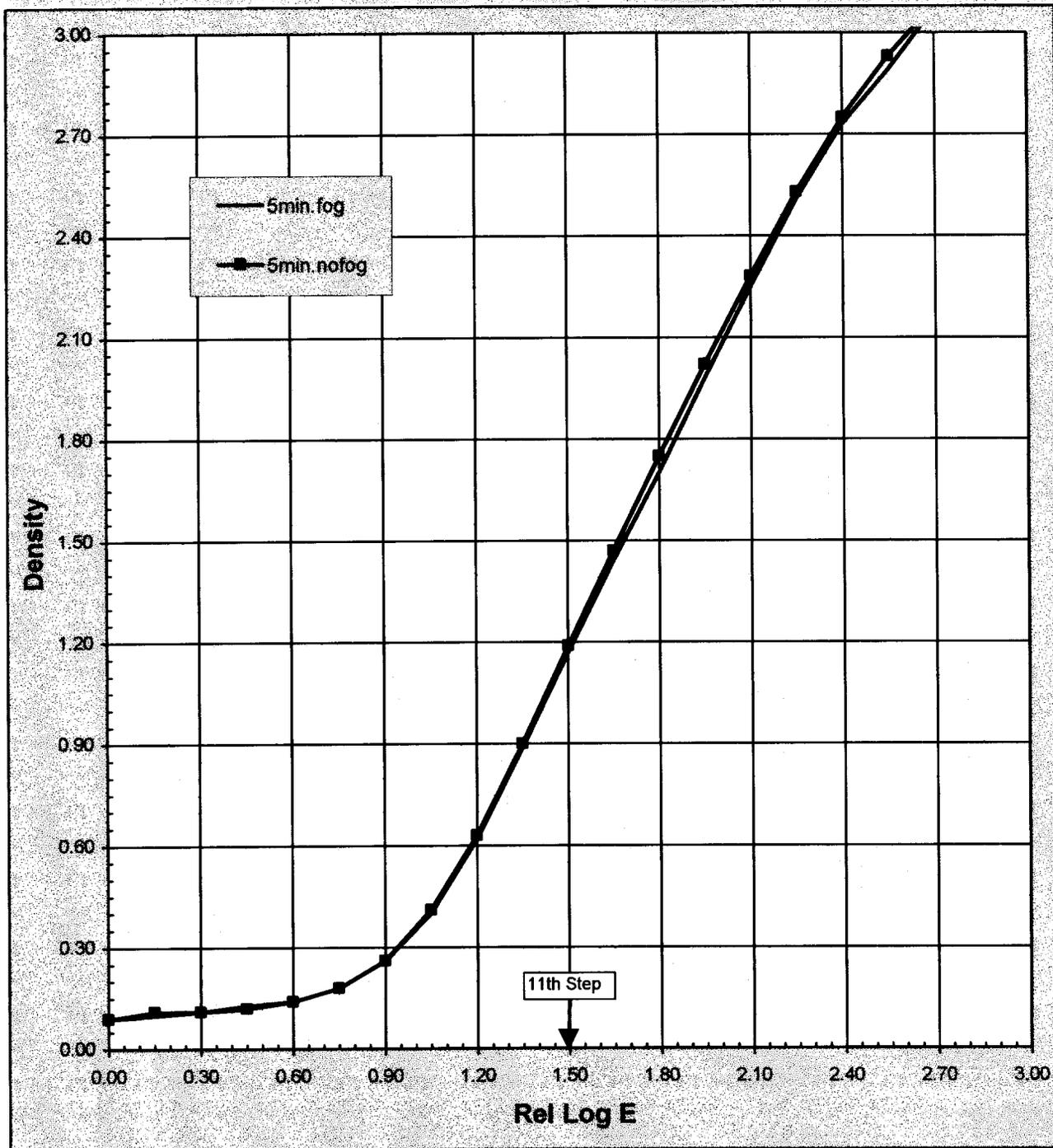
3404 Eight Hour Exposure

Date: 08/02/1999
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Feature Film: 3404-0641
Exposure: 1B, 3000 K (4500 K), D/L, 1/100 Second
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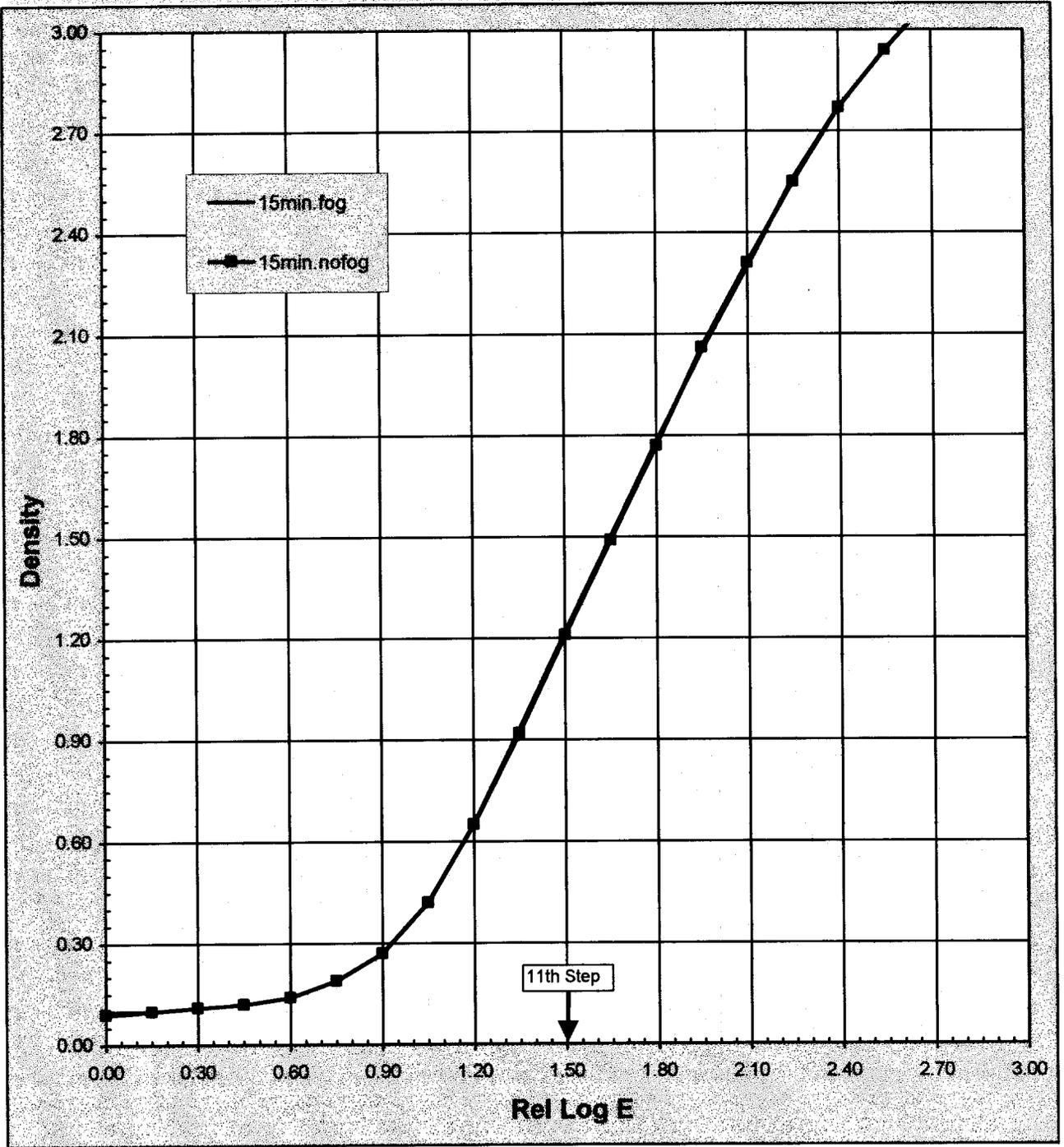
3412 Five Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3412-1661
Exposure: 1B, 3000 K (4500 K), D/L, 1/50 Second
Process: VERSAMAT 1140, 641 Developer, 89 Degrees, 13 fpm, 1 Rack



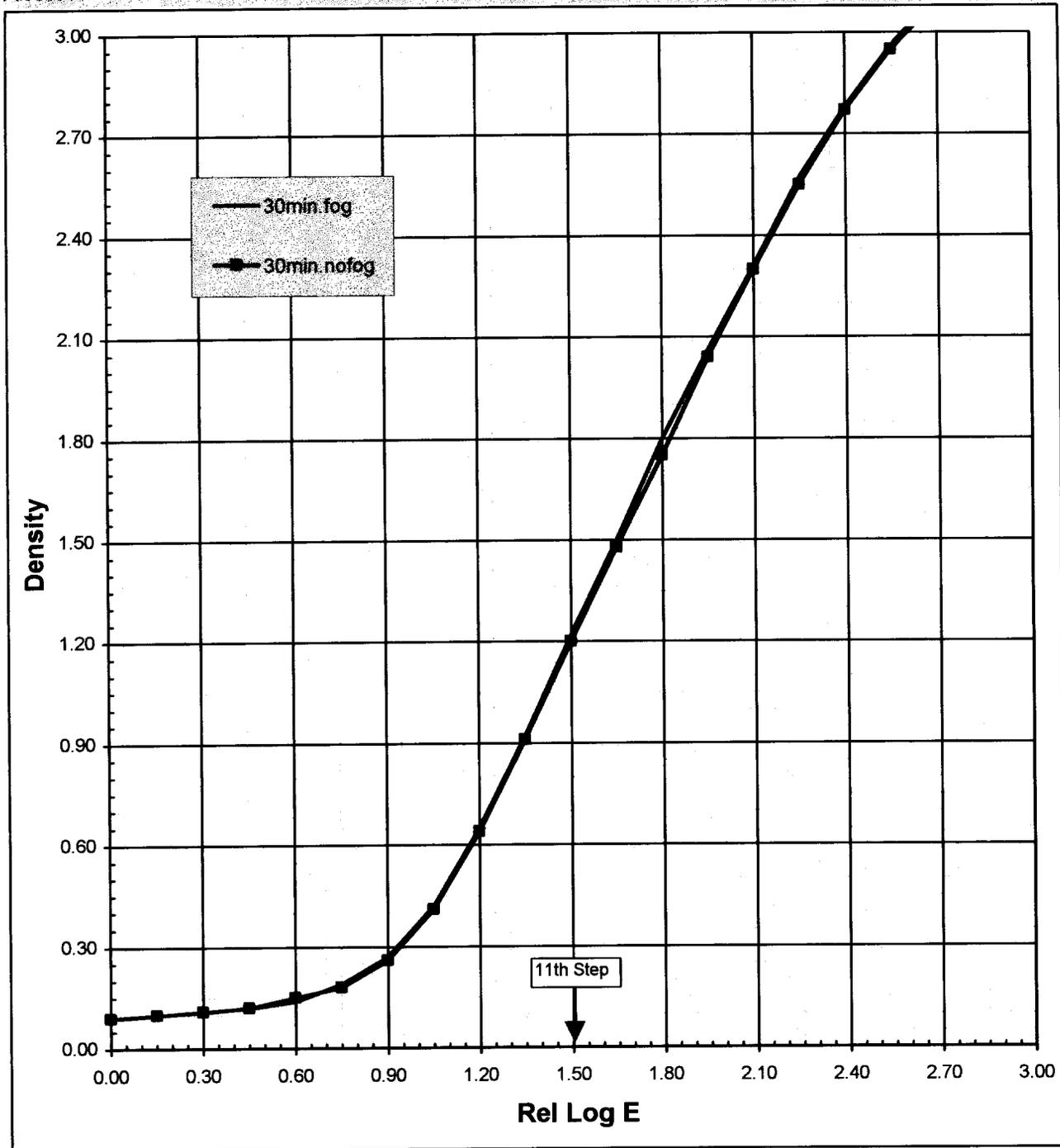
3412 Fifteen Minute Exposure

Date: 08/02/1999
By: G. Menchey
Feature Film: 3412-1661
Exposure: 1B, 3000 K (4500 K), D/L, 1/50 Second
Process: VERSAMAT 1140, 641 Developer, 89 Degrees, 13 fpm, 1 Rack



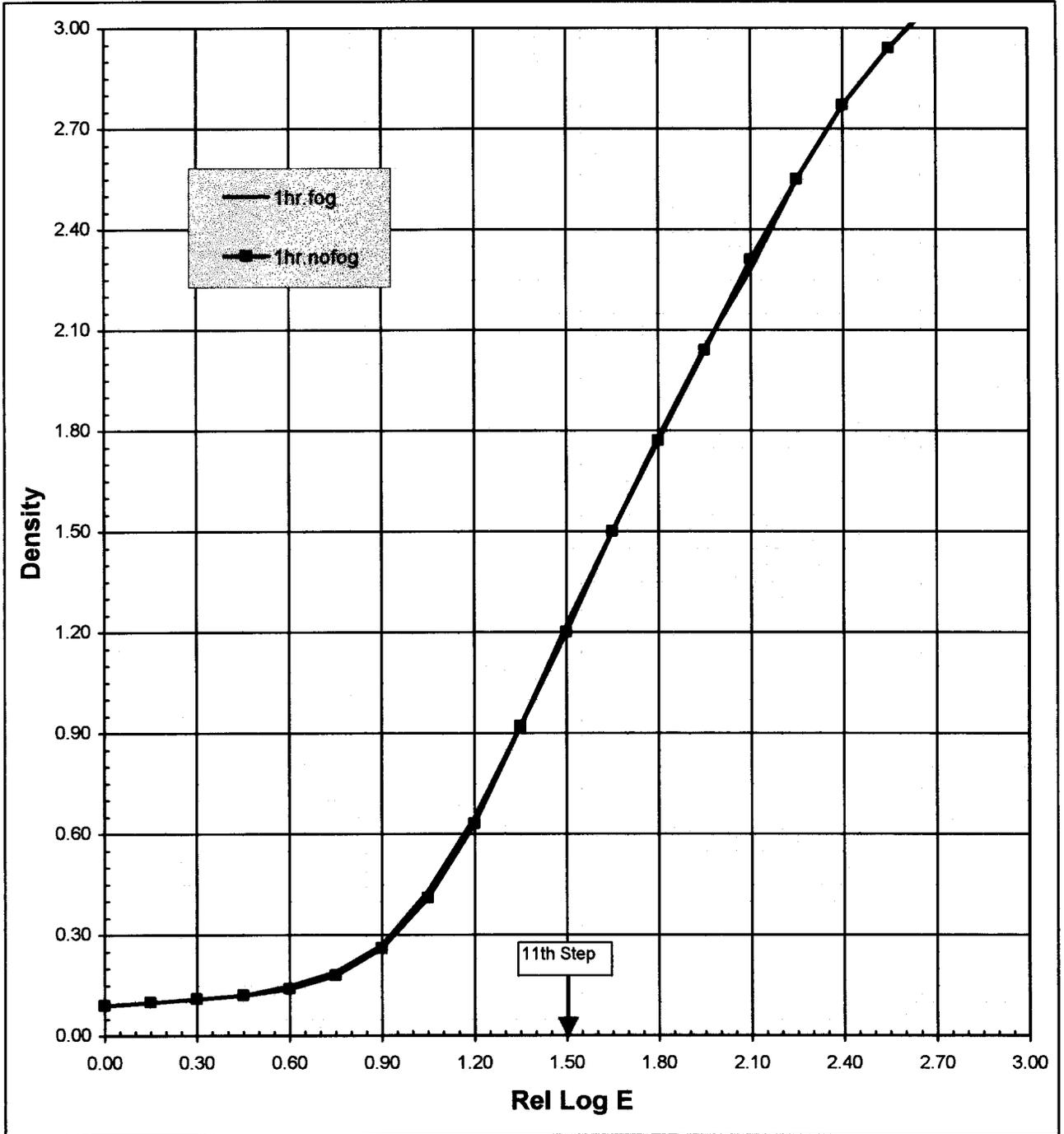
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Feature Film: 3412-1661
Exposure: 1B, 3000 K (4500 K), D/L, 1/50 Second
Process: VERSAMAT 1140, 641 Developer, 89 Degrees, 13 fpm, 1 Rack



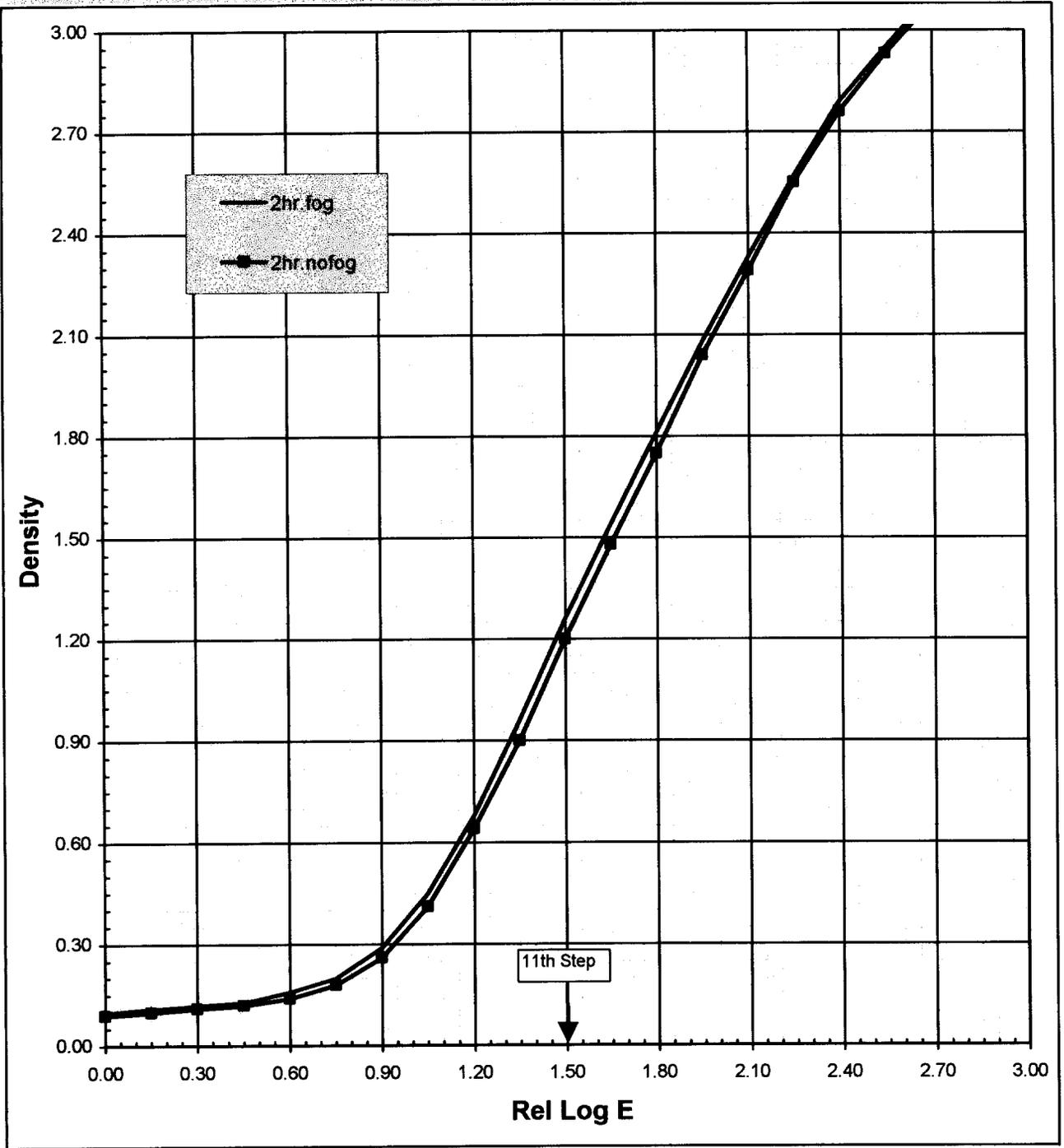
3412 One Hour Exposure

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By: G. Menchey
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