Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

memorandum

TO: Distribution

DATE: February 11, 1982

FROM: Z. V. Dash ZVD

MAIL STOP/TELEPHONE: 981/7-4318

SYMBOL: ESS-4

SUBJECT: POLYNOMIAL FITS TO EE-2 AND EE-3 TEMPERATURE DATA

Several people have expressed interest in having simple equations that describe "original" temperature conditions in EE-2 and EE-3. Polynomials were fit to the most recent EE-2 (1-05-82) and EE-3 (1-19-82) background temperature logs using a least squares technique. For both wellbores the data were divided into two parts, from 0-2450 feet and 2450 feet to TD, and fit with appropriate polynomials. The upper portions (0-2450 feet) were easily fit with first order (linear) polynomials, while the lower intervals (2450 feet-TD) were matched with second order polynomials. The resulting equations for the two wells were amazingly similar and "averaged" polynomials fit the data for both EE-2 and EE-3 fairly well. The polynomials are tabulated below and curves showing the actual temperature logs plus the polynomial fits are attached. All depths used in this analysis were corrected Log Cable Depths.

Polynomials Fit to EE-2 and EE-3 Temperature Log Data

EE-2

0-2450 feet	$T = 15.265 + 2.8448 \times 10^{-2} D$
2450-15289 feet	$T = 60.698 + 8.8064 \times 10^{-3} D + 5.2656 \times 10^{-7} D^2$

EE-3

0-2450 feet	$T = 15.21 + 2.8056 \times 10^{-2} D$
2450-13933 feet	$T = 62.401 + 7.0776 \times 10^{-3} D + 6.5861 \times 10^{-7} D^2$

Averaged Polynomials

0-2450 feet	$T = 15.24 + 2.825 \times 10^{-2} D$
2450-TD	$T = 61.55 + 7.942 \times 10^{-3} D + 5.926 \times 10^{-7} D^2$

T , Temperature (°C)

D , Depth (feet)

ZVD/jb
Distribution
J. Hill/978
ESS-4 Staff
ESS-4 file

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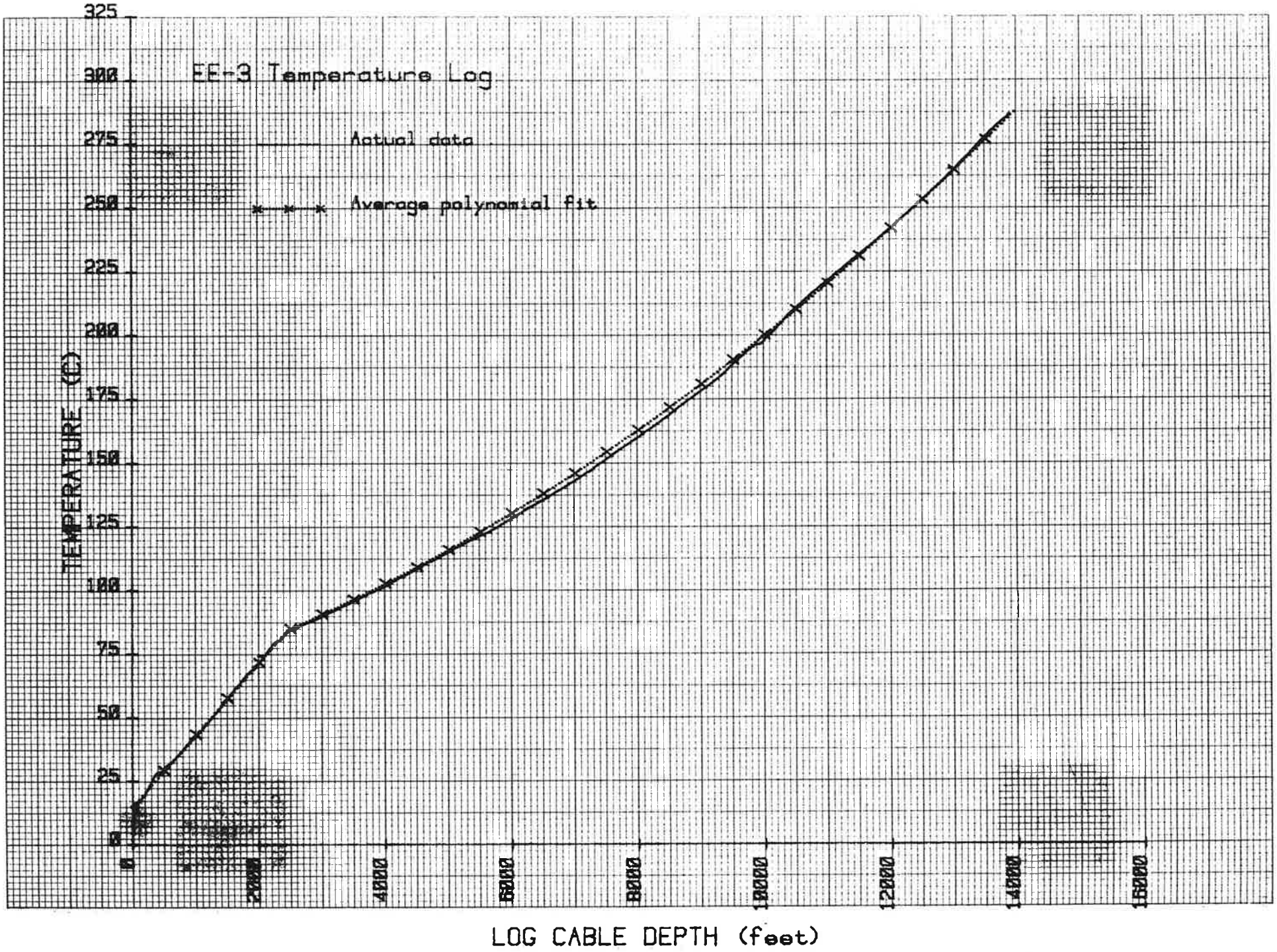

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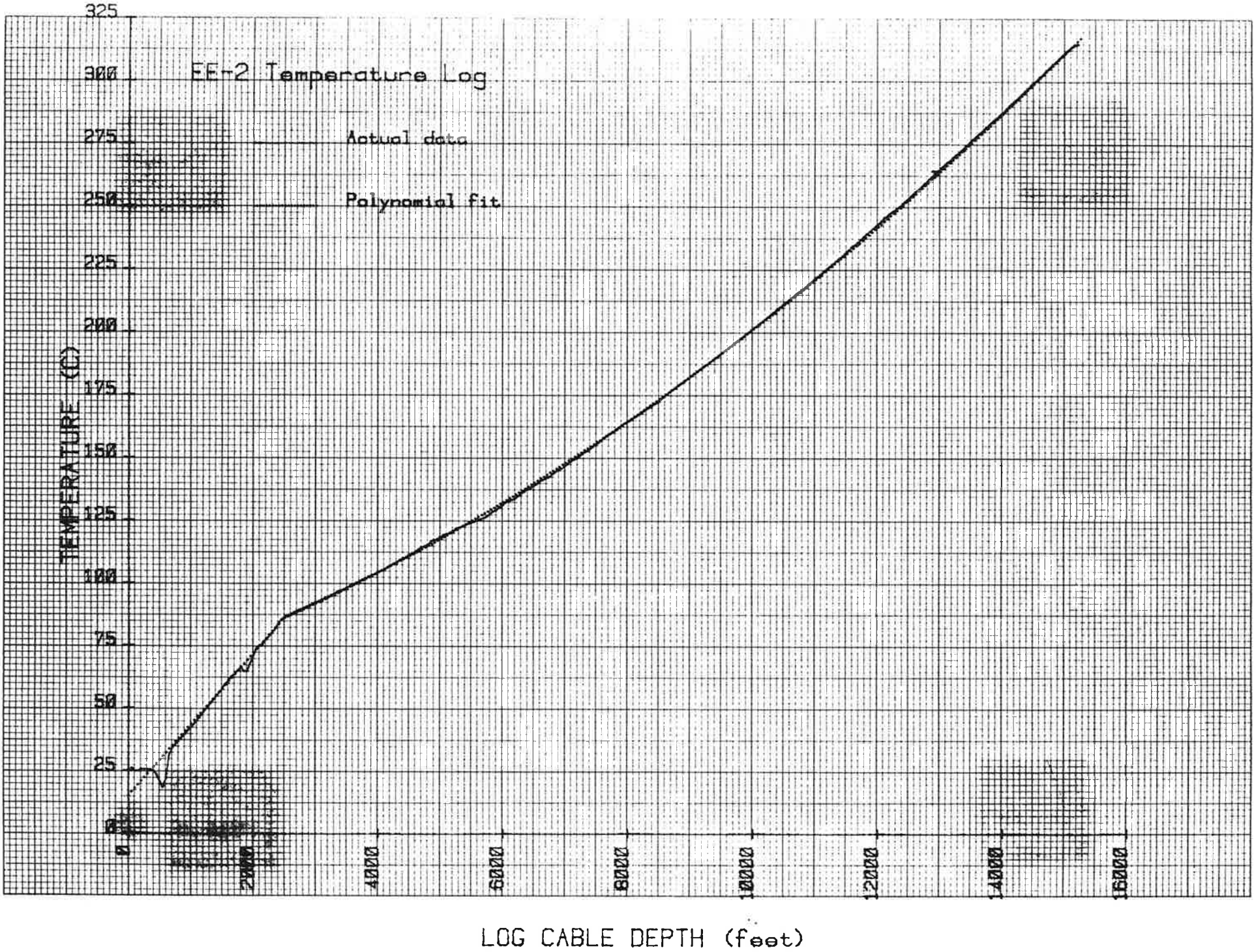

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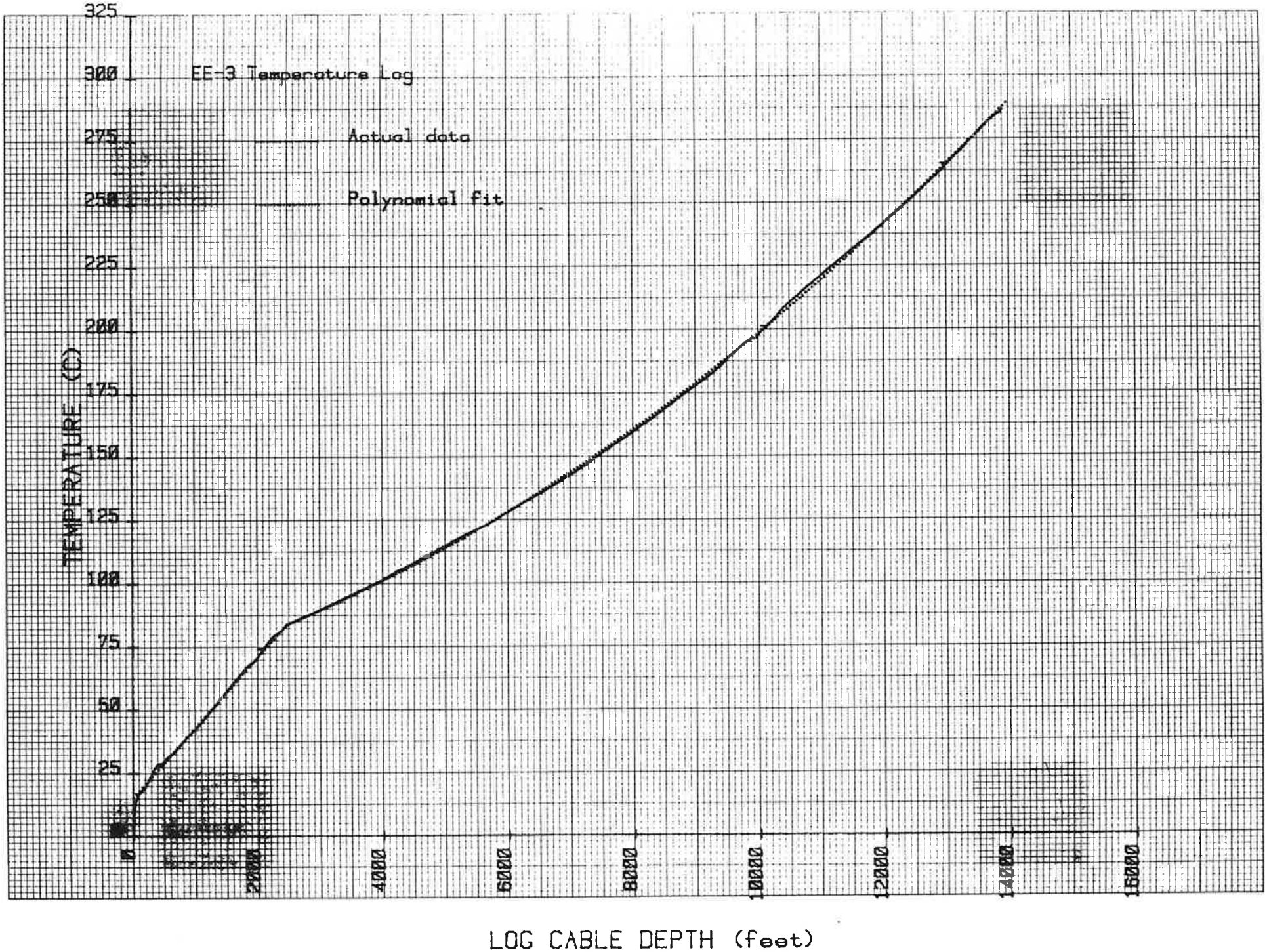

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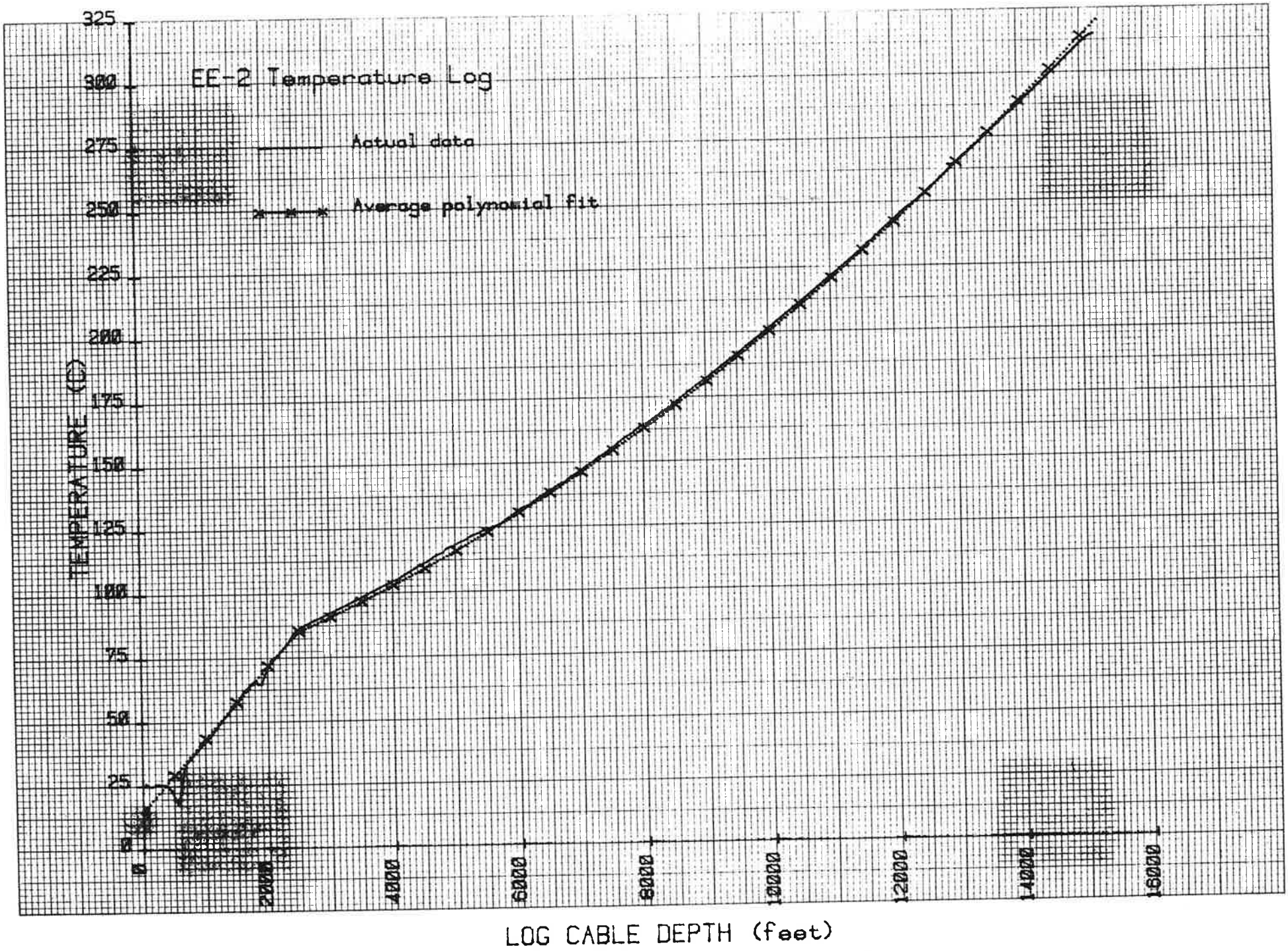
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