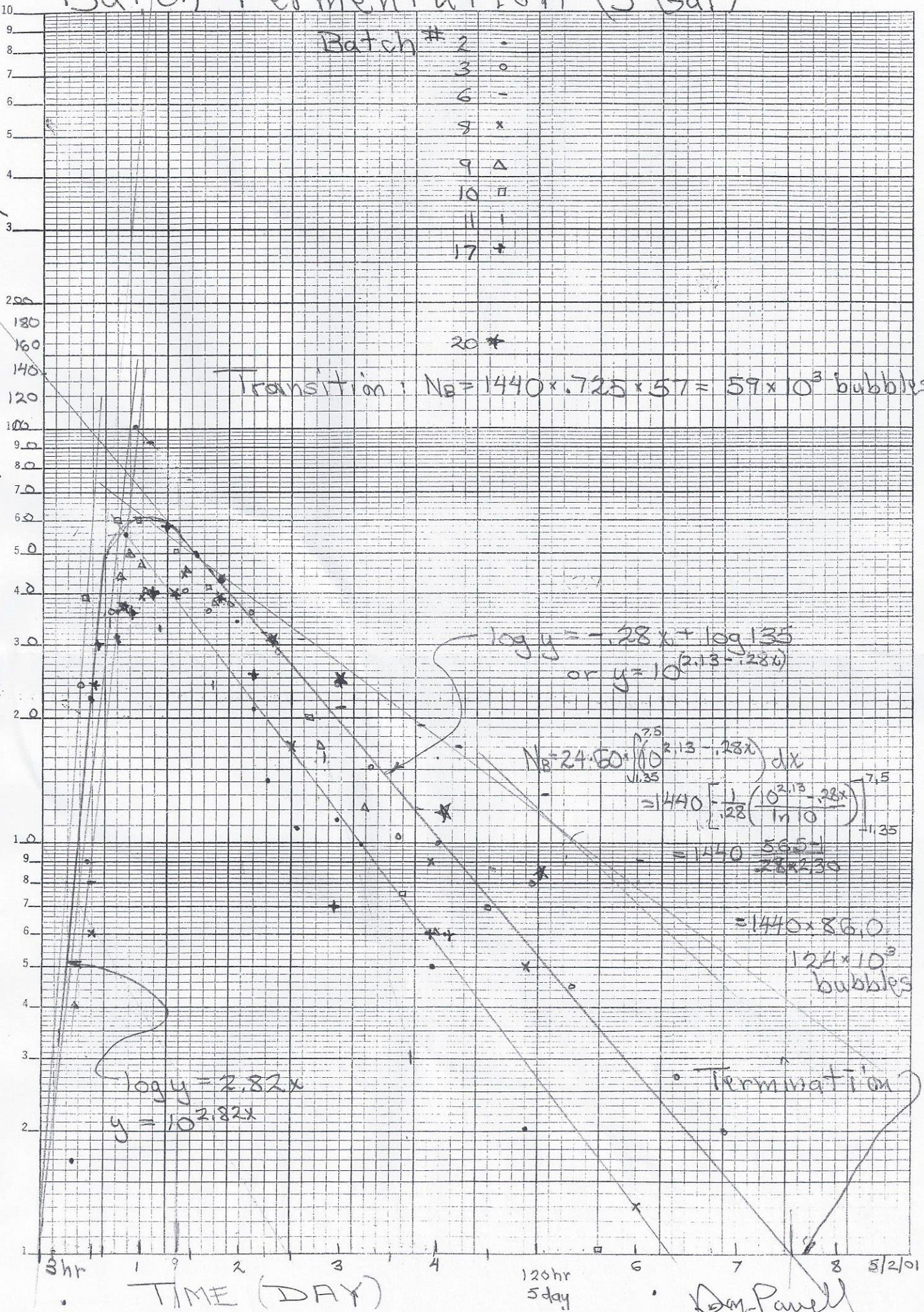


# Batch Fermentation (5 Gal)

- Batch #
- 2 •
  - 3 ○
  - 6 -
  - 8 x
  - 9 Δ
  - 10 □
  - 11 |
  - 17 +

Fermentation Rate (Bubbles per minute)

SEMI-LOGARITHMIC 46 5493  
 3 CYCLES X 70 DIVISIONS MADE IN U.S.A.  
 WILHELM & CO.



Transition:  $N_B = 1440 \times .725 \times .57 = 59 \times 10^3$  bubbles

$$\log y = -.28x + \log 135$$

$$\text{or } y = 10^{(2.13 - .28x)}$$

$$N_B = 24.60 \int_{1.35}^{7.5} 10^{(2.13 - .28x)} dx$$

$$= 1440 \left[ \frac{1}{.28} \left( \frac{10^{(2.13 - .28x)}}{\ln 10} \right) \right]_{1.35}^{7.5}$$

$$= 1440 \frac{565 - 1}{.28 \times 2.30}$$

$= 1440 \times 86.0$   
 $124 \times 10^3$   
 bubbles

$$\log y = 2.82x$$

$$y = 10^{2.82x}$$

Termination

TIME (DAY)

120hr  
5 day

Don-Powell

5/2/01