

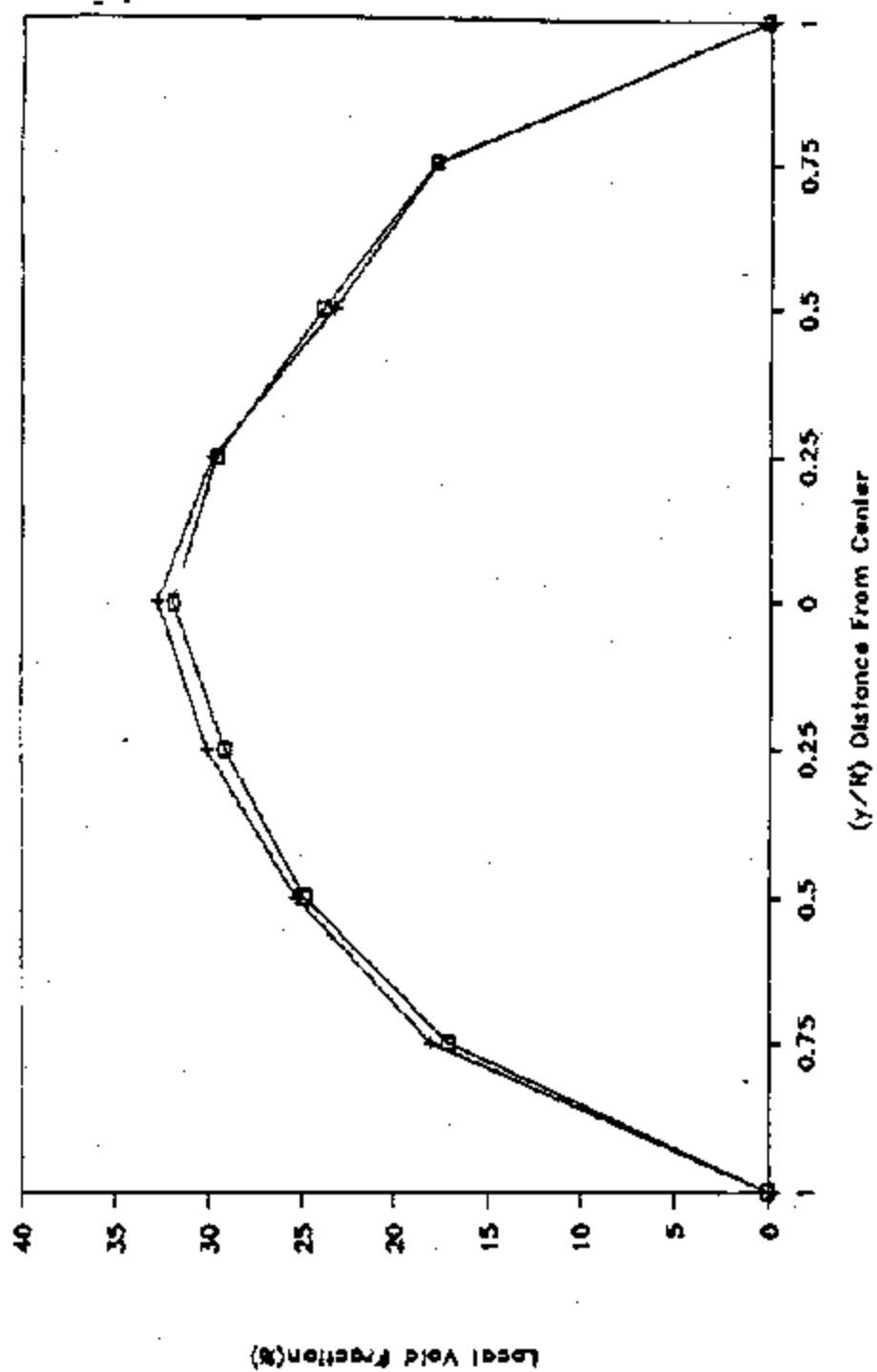


Figure 2.40 Voidage Profile with 3 ft. of Water, Probes - 36" Above Distributor Plate, and $Q = 10.4$ CFM.

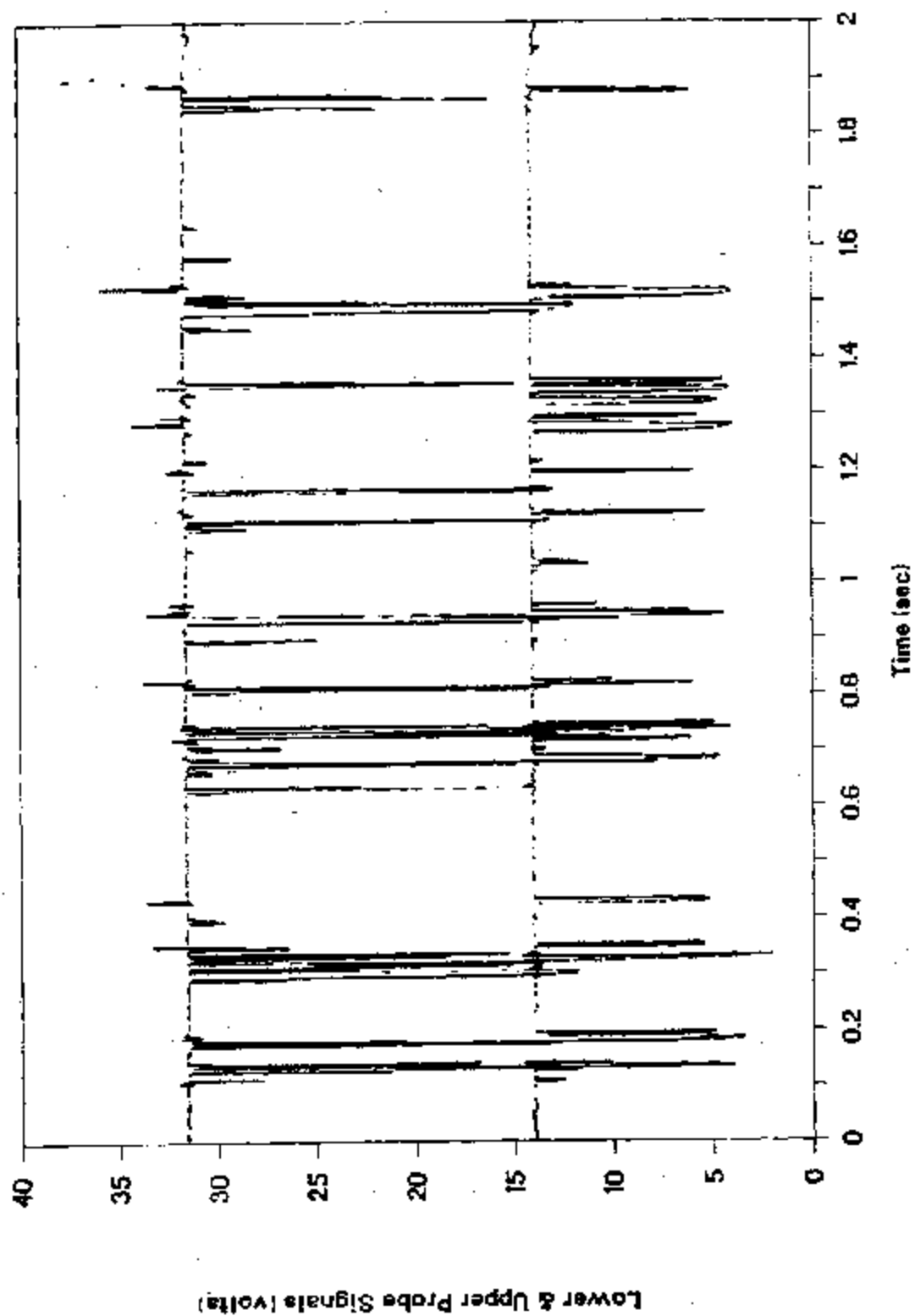


Figure 2.41 - Experimental Trace of Double Resistance Probe with Inconsistent Data

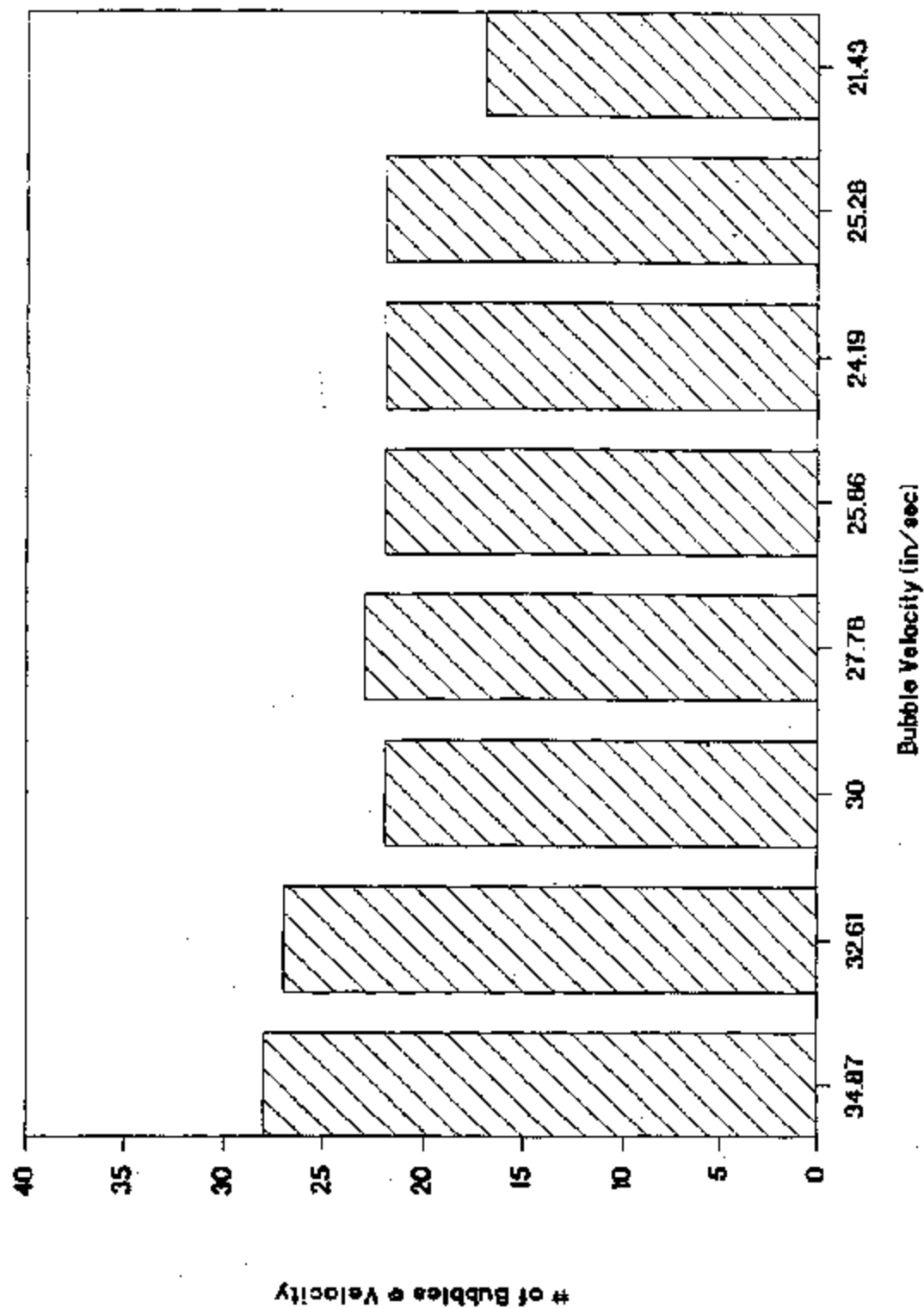


Figure 2.42 - Histogram of Bubble Velocities with 2 ft. of water
 Probes 12 in. from Distributor Plate @ center of column.
 $Q(g) = 4.6$ CFM, Window Frame, $V_{max} = 1.4$ V pred.
 $V = 0.6$ volts.

FLOW CHART DIAGRAM

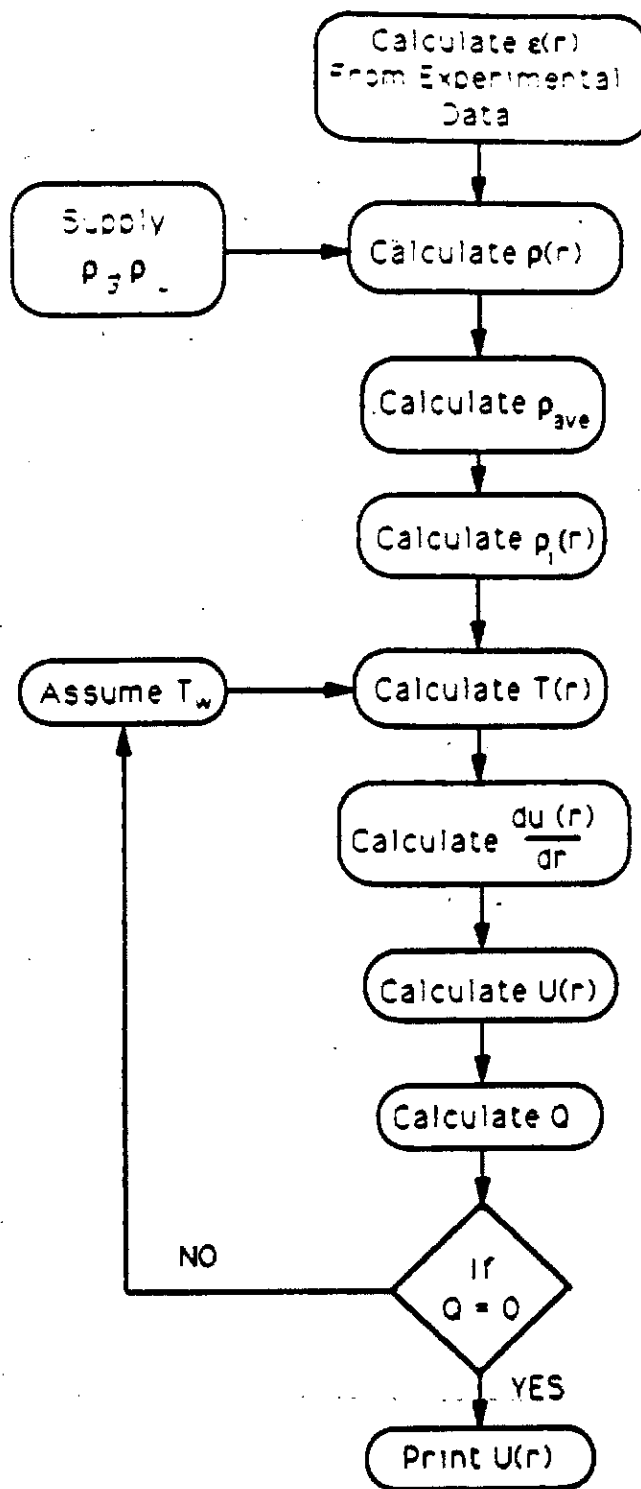


Figure 2.43 Liquid Velocity Model Flowchart

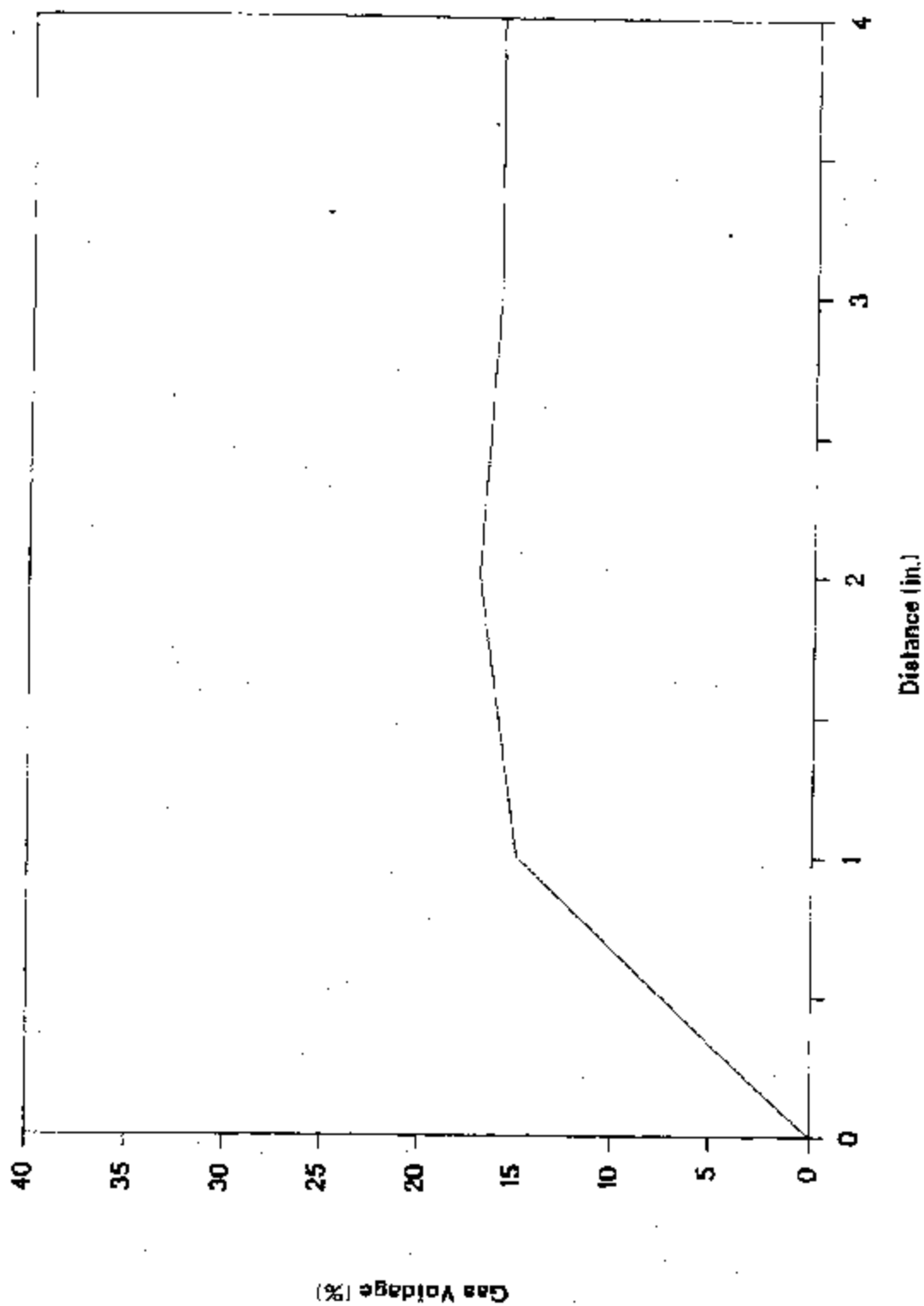


Figure 2.44 - Calculated Local Void Fraction Profile with 1 ft. of water
Probes 6 in. from Distributor Plate, $Q(g) = 4.6 \text{ CFM}$

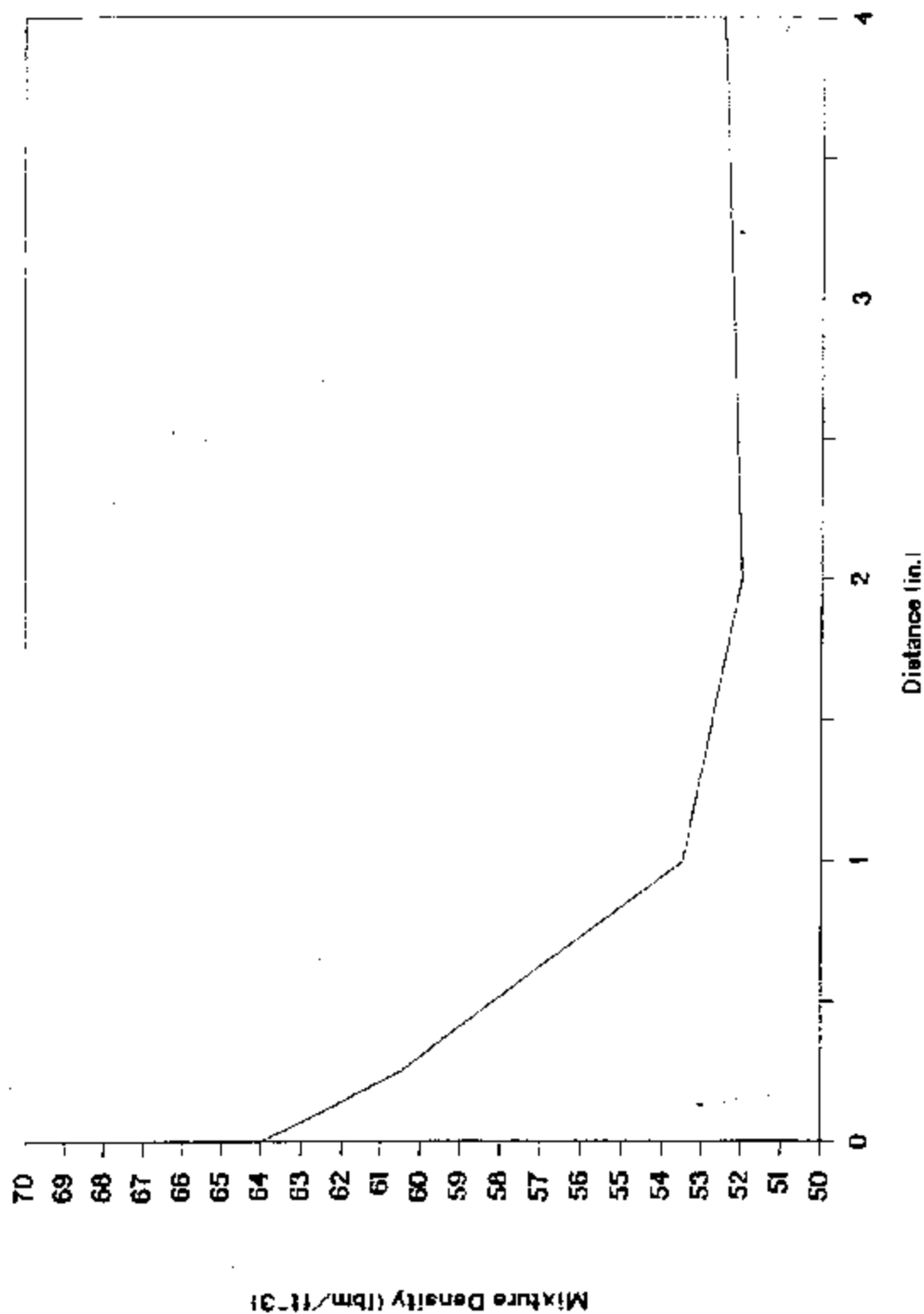


Figure 2.45 - Calculated Mixture Density Profile with 1 ft. of water
Probes 6 in. from Distributor Plate, $Q(g) = 4.6$ CFM

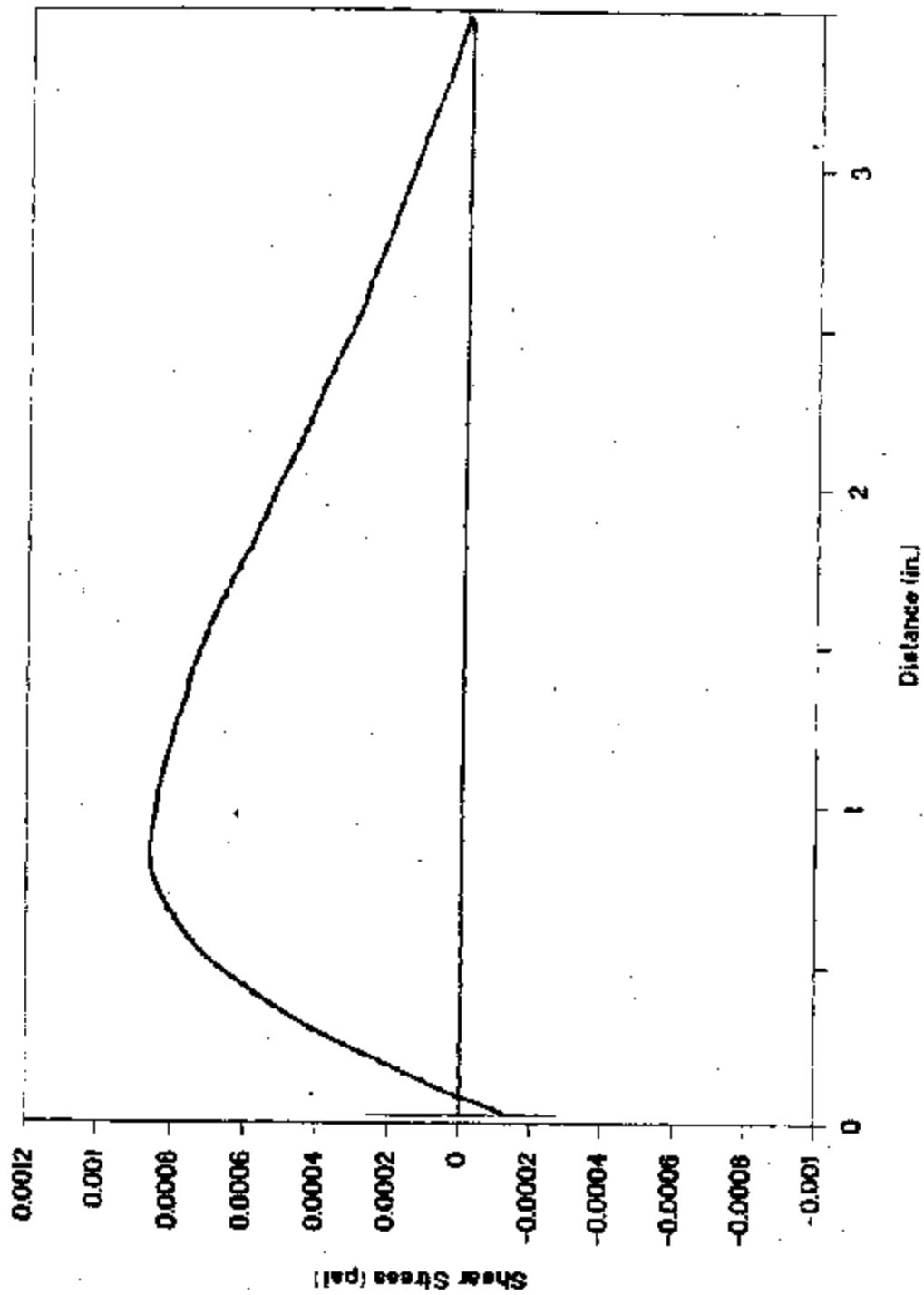


Figure 2.46 - Calculated Shear Stress Profile with 1 ft. of water.
Probes 6 in. from Distributor Plate, $Q(g) = 4.6$ CFM

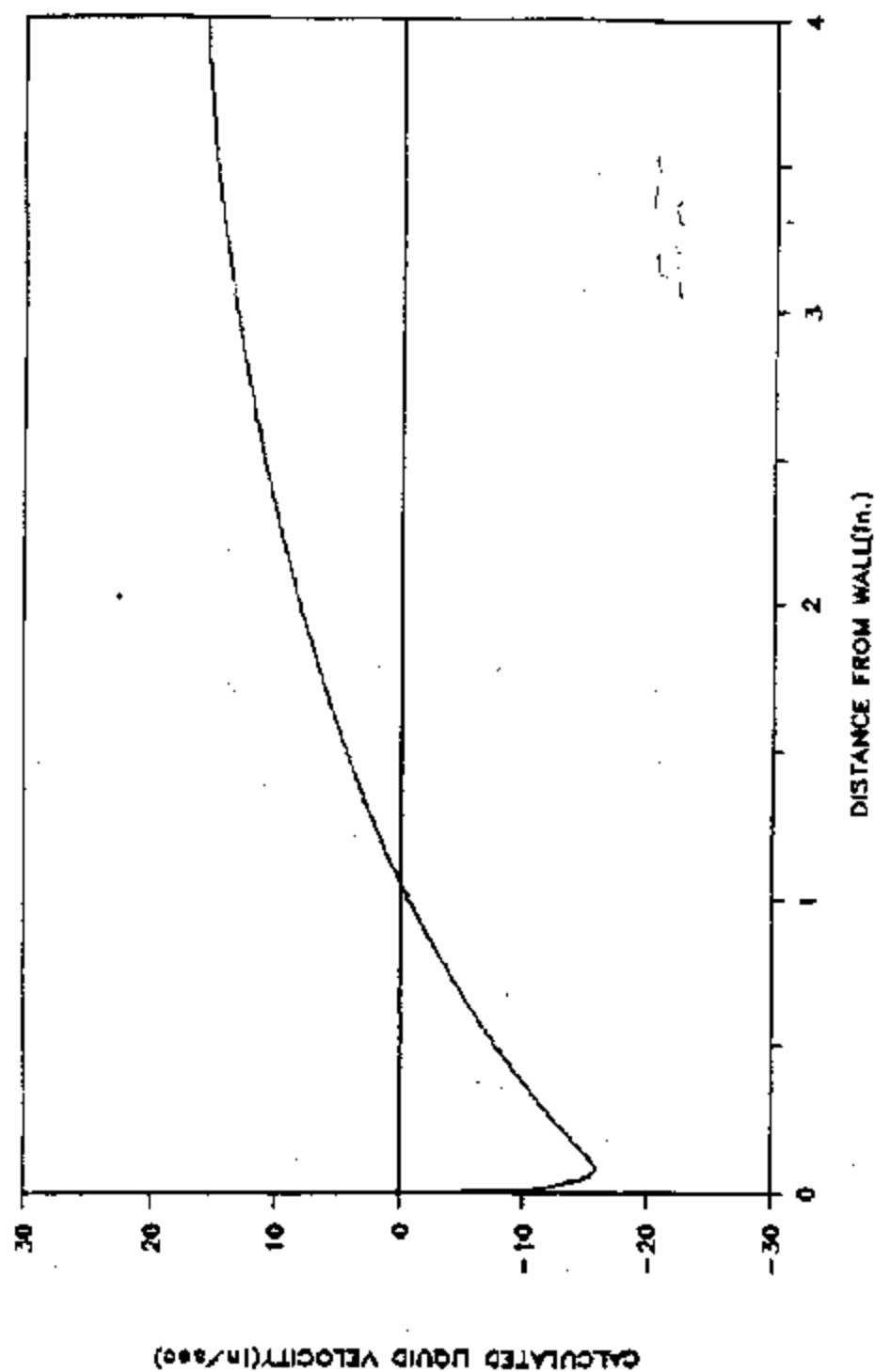


Figure 2.47 - Calculated Liquid Velocity Profile with 1 ft. of Water.
Probes - 6" above Distributor Plate, $P_w = -1.932 \times 10^{-3}$ psi,
and $Q_{if} = 4.6$ CFM (Figure 4.1 is Corresponding Voidage
Profile)

L114

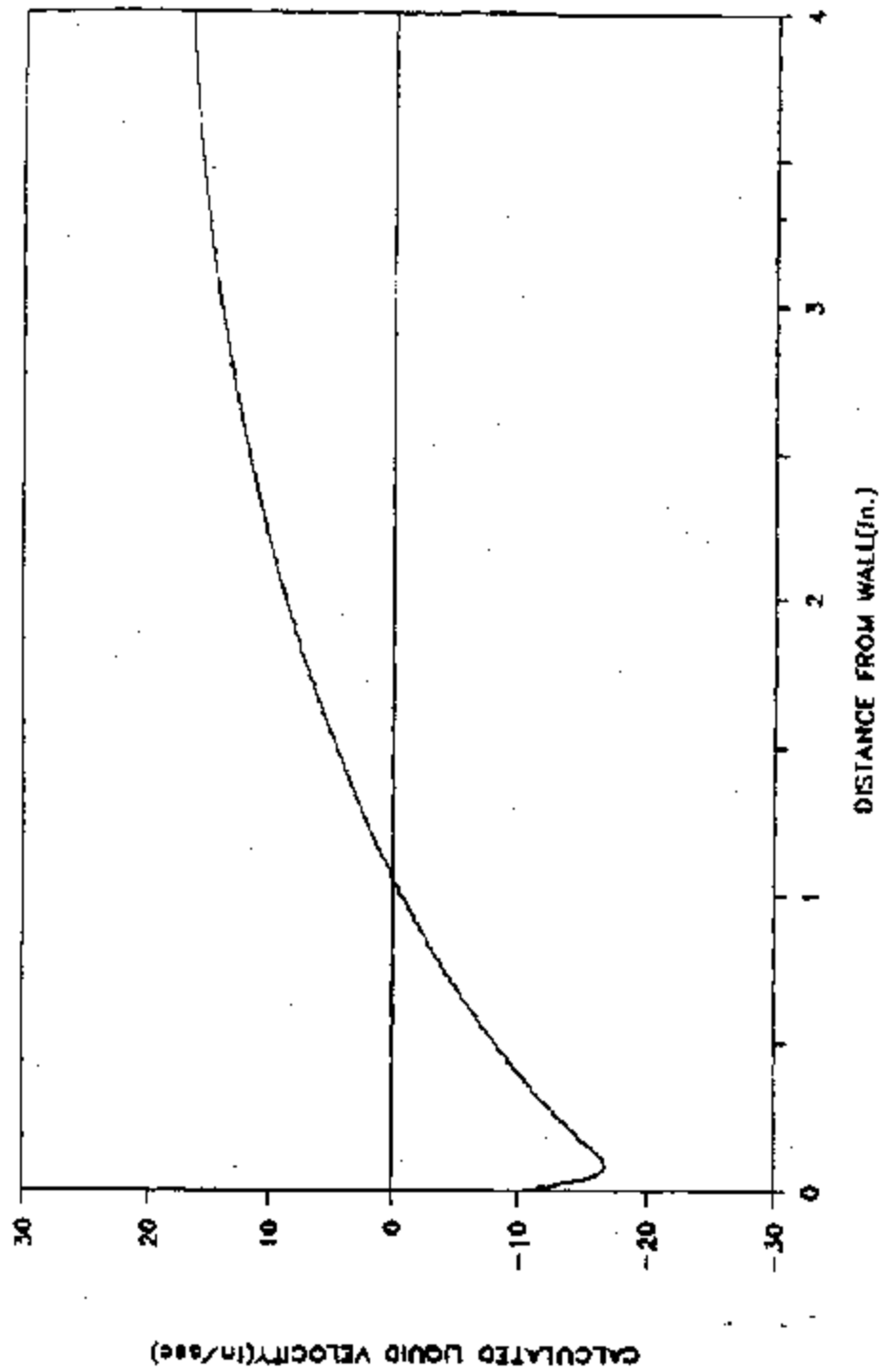


Figure 2.48- Calculated Liquid Velocity Profile with 1 ft. of water,
Probes - 12" above Distributor Plate, $T_w = -2.06 \times 10^4$ psi,
and $Q_u = 4.6$ CFM (Figure 4.2 is Corresponding Voidage
Profile)

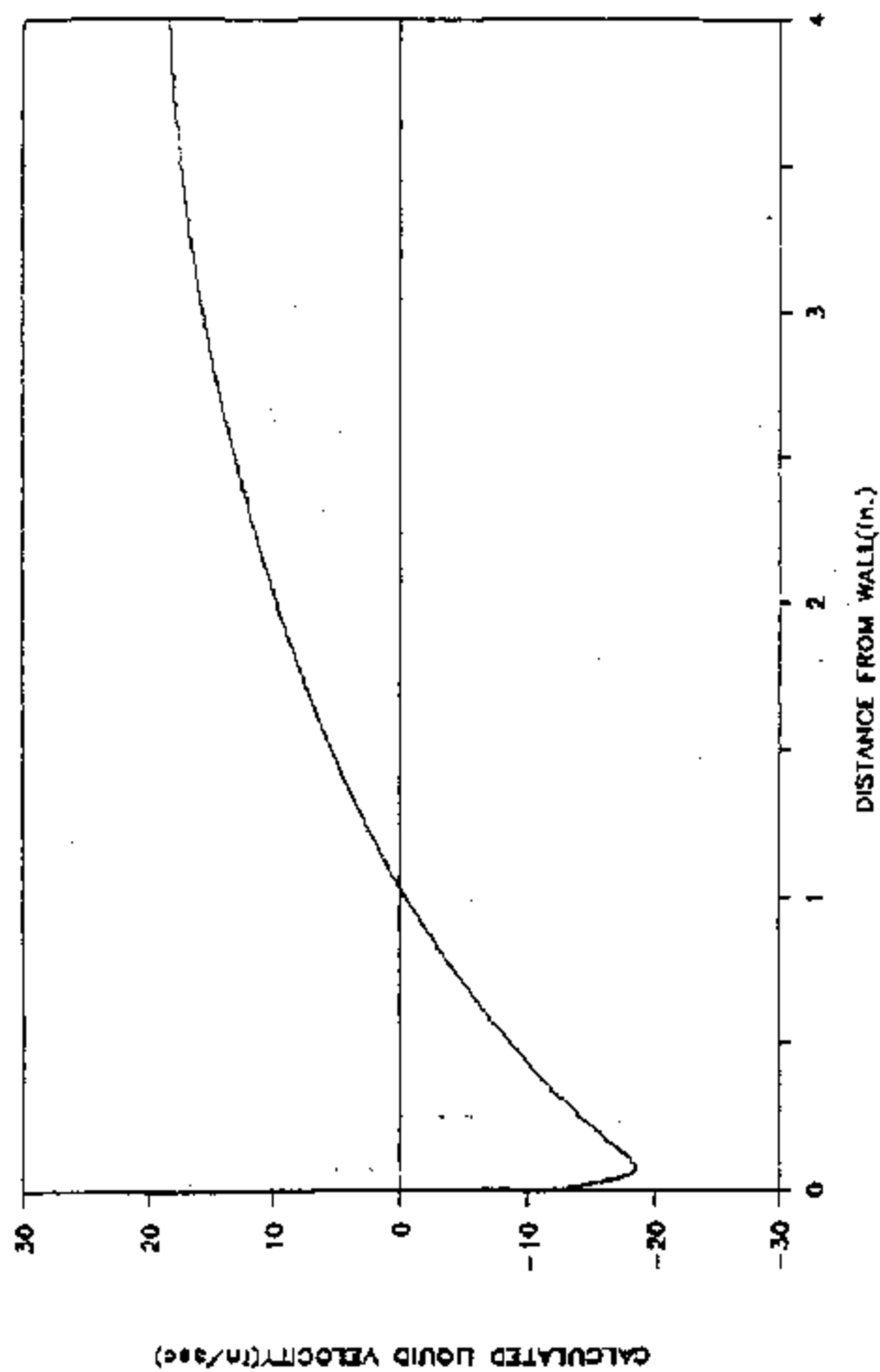


Figure 2.49- Calculated Liquid velocity Profile with 1 ft. of Water, Probes - 6" above Distributor Plate, $T_w = -2.36 \times 10^{-3}$ psi, and $Q_u = 7.3$ CFM (Figure 4.3 is Corresponding Voidage Profile)