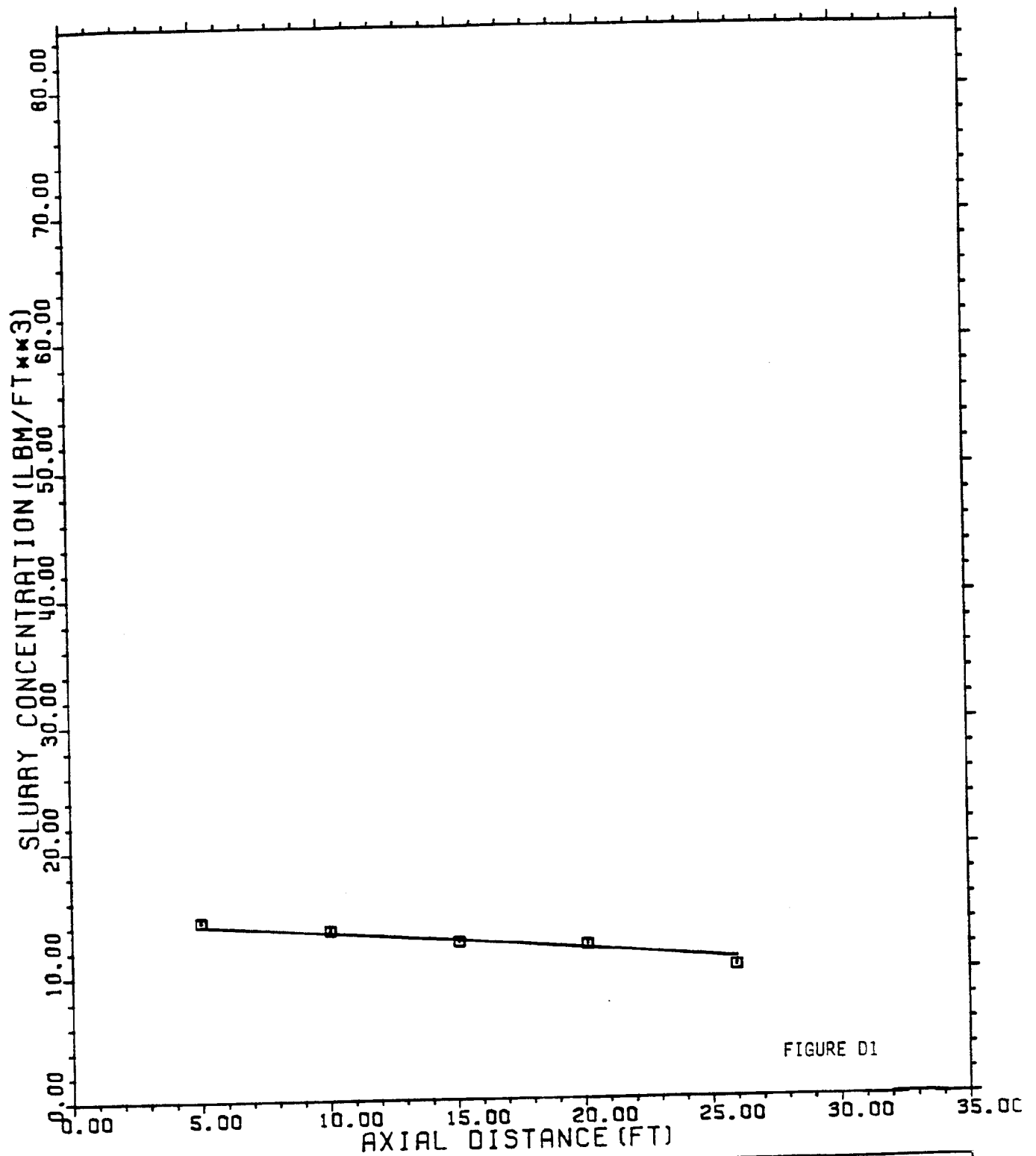


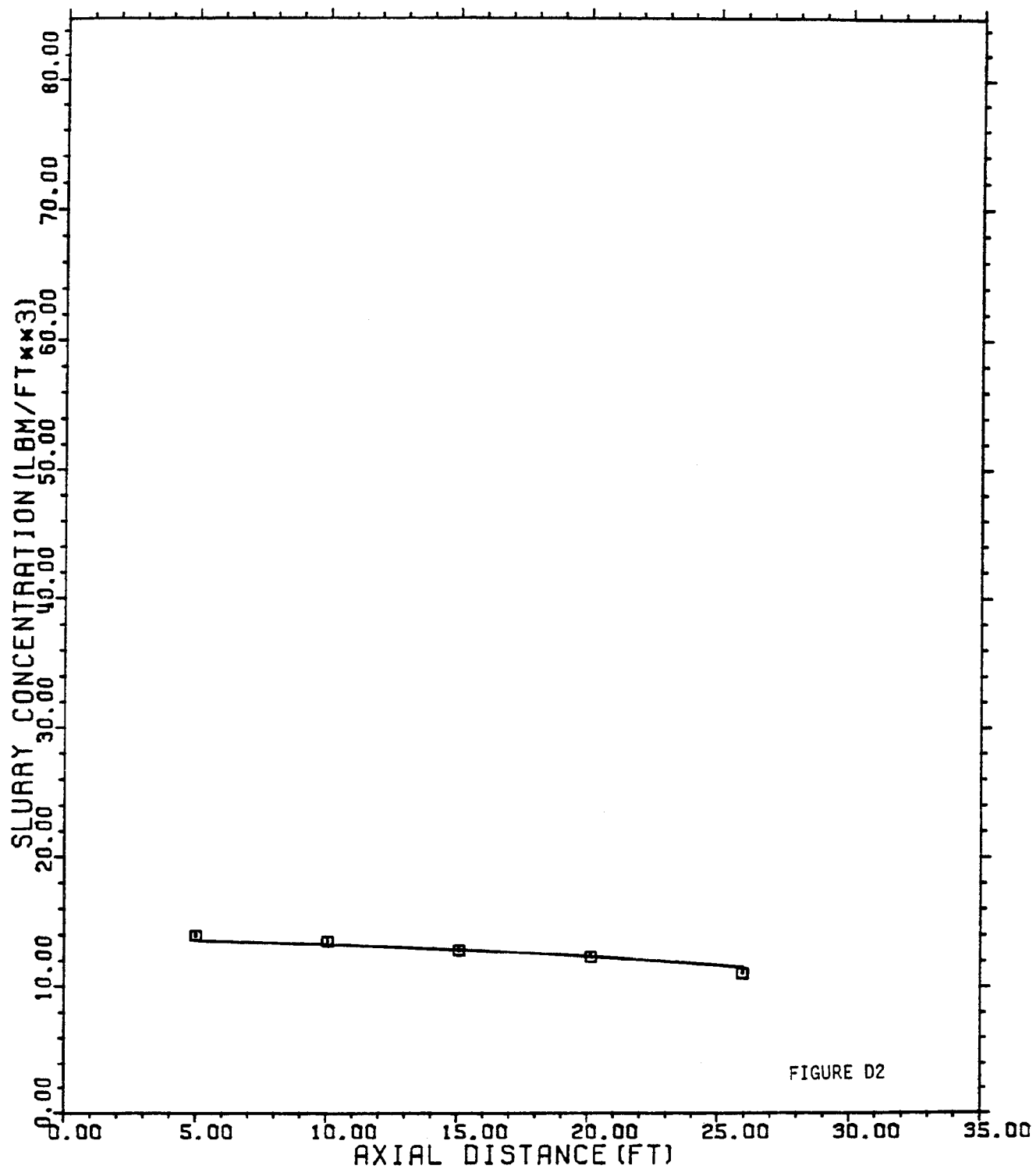
APPENDIX D

Solid Distribution Profile Data Fit

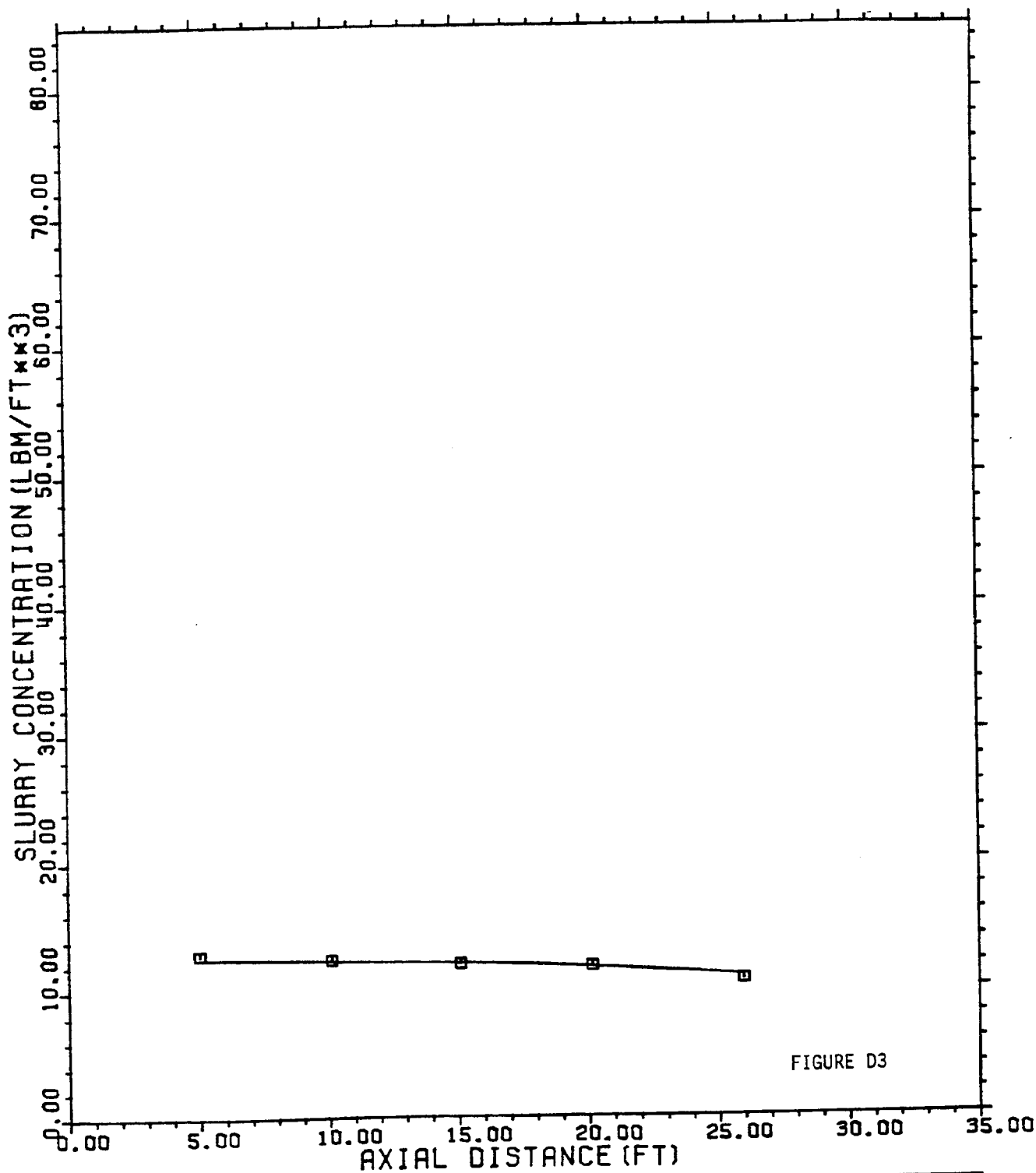
Air/Water/Sand  
Nitrogen/Tetralin/Sand  
Nitrogen/Glycol-Water/Sand  
(Figures D1 through D40)



| CONC. VS. L                                                                                                                                                                                              |                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT=2/SEC): .62<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT=2/SEC): .62<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                   |  |



| CONC. VS. L                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .62<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                 |  |

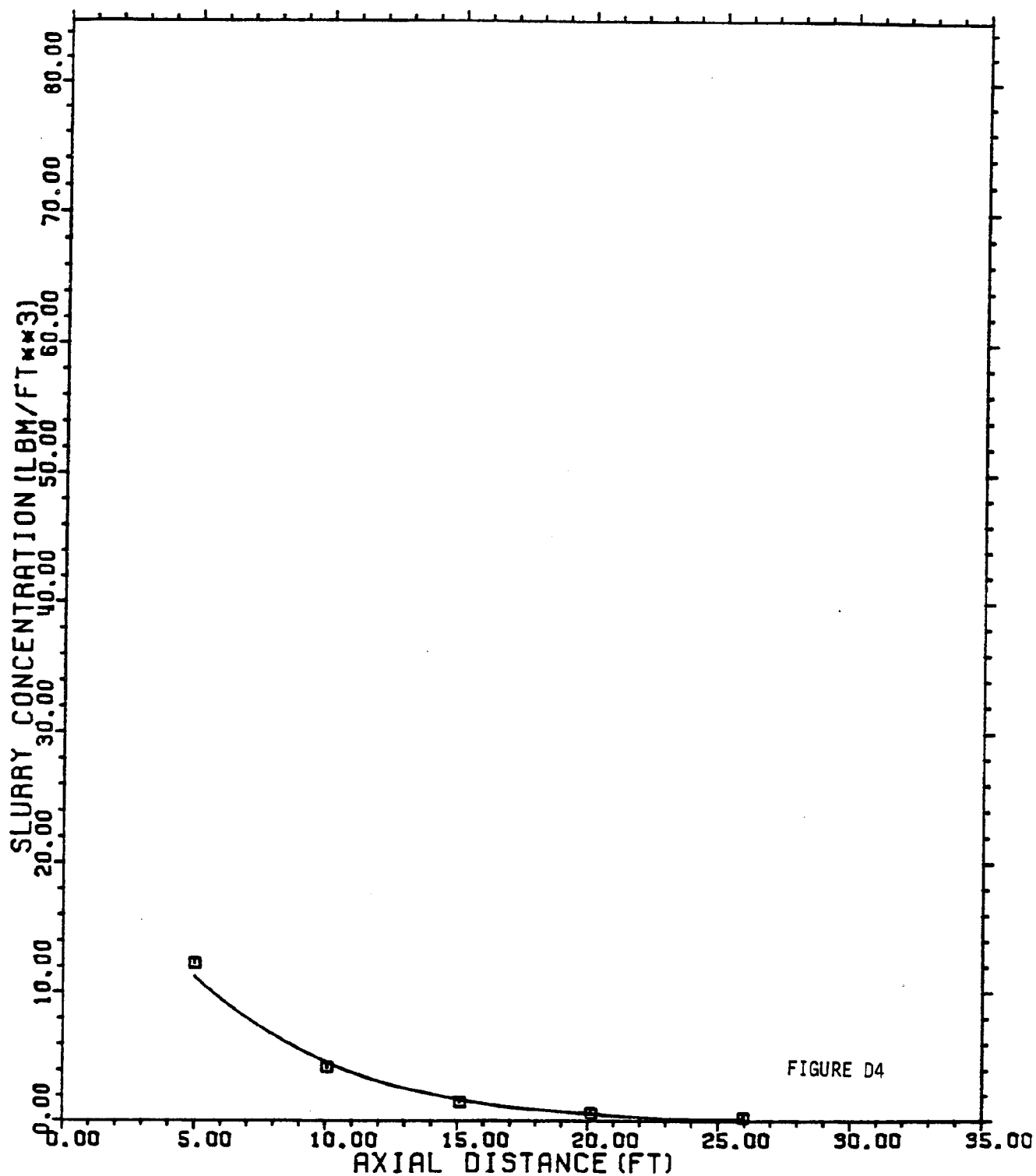
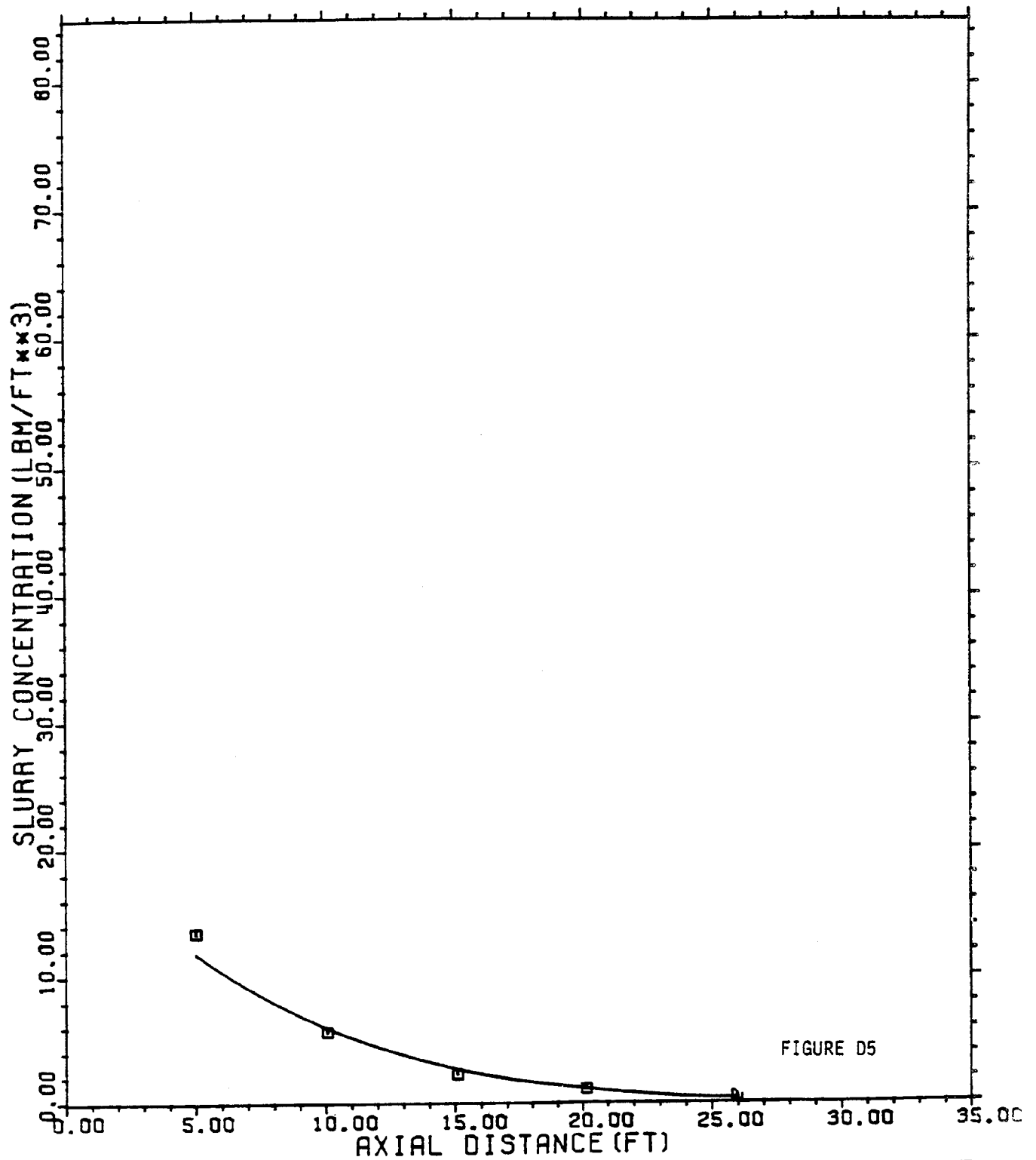
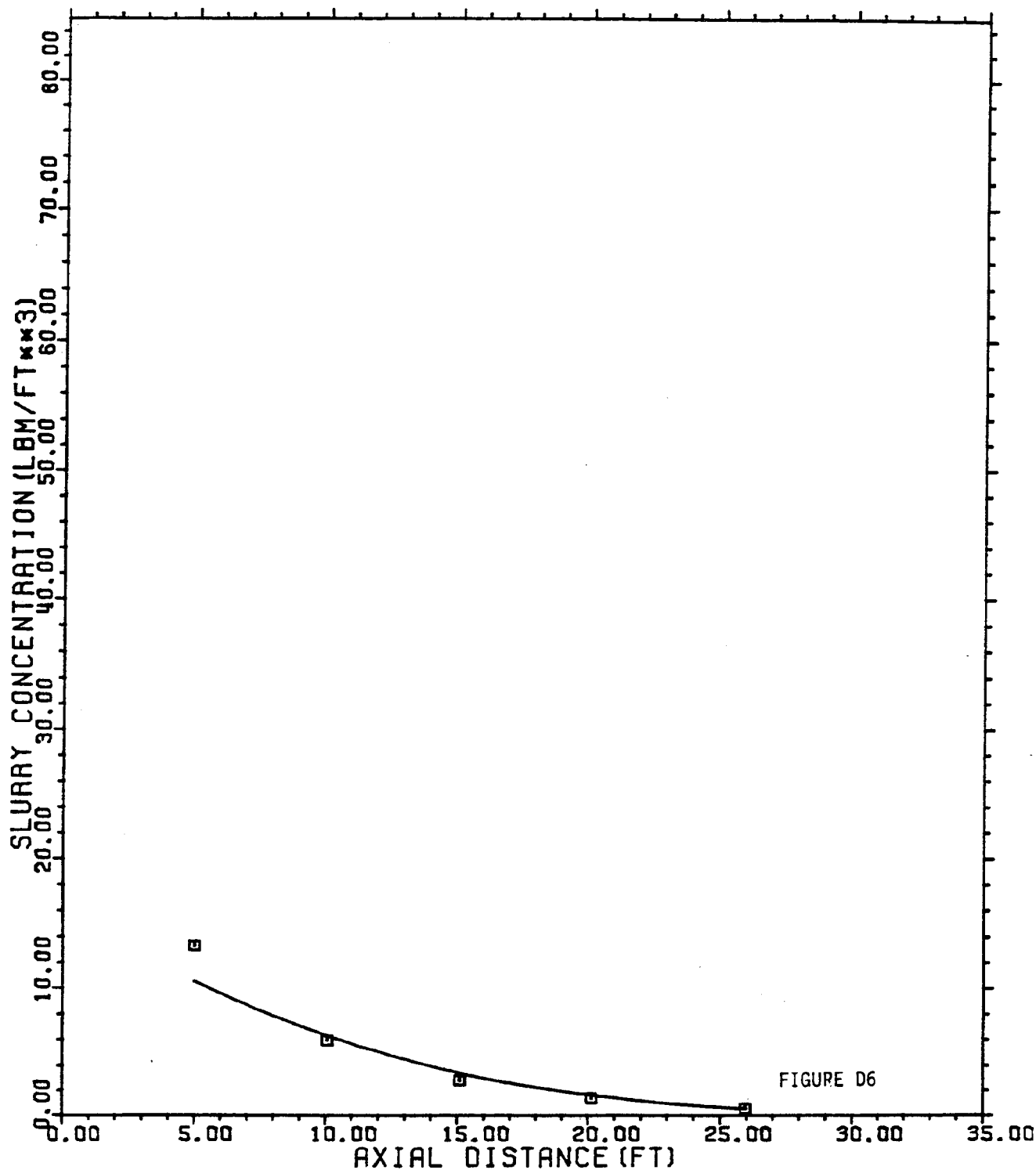


FIGURE D4

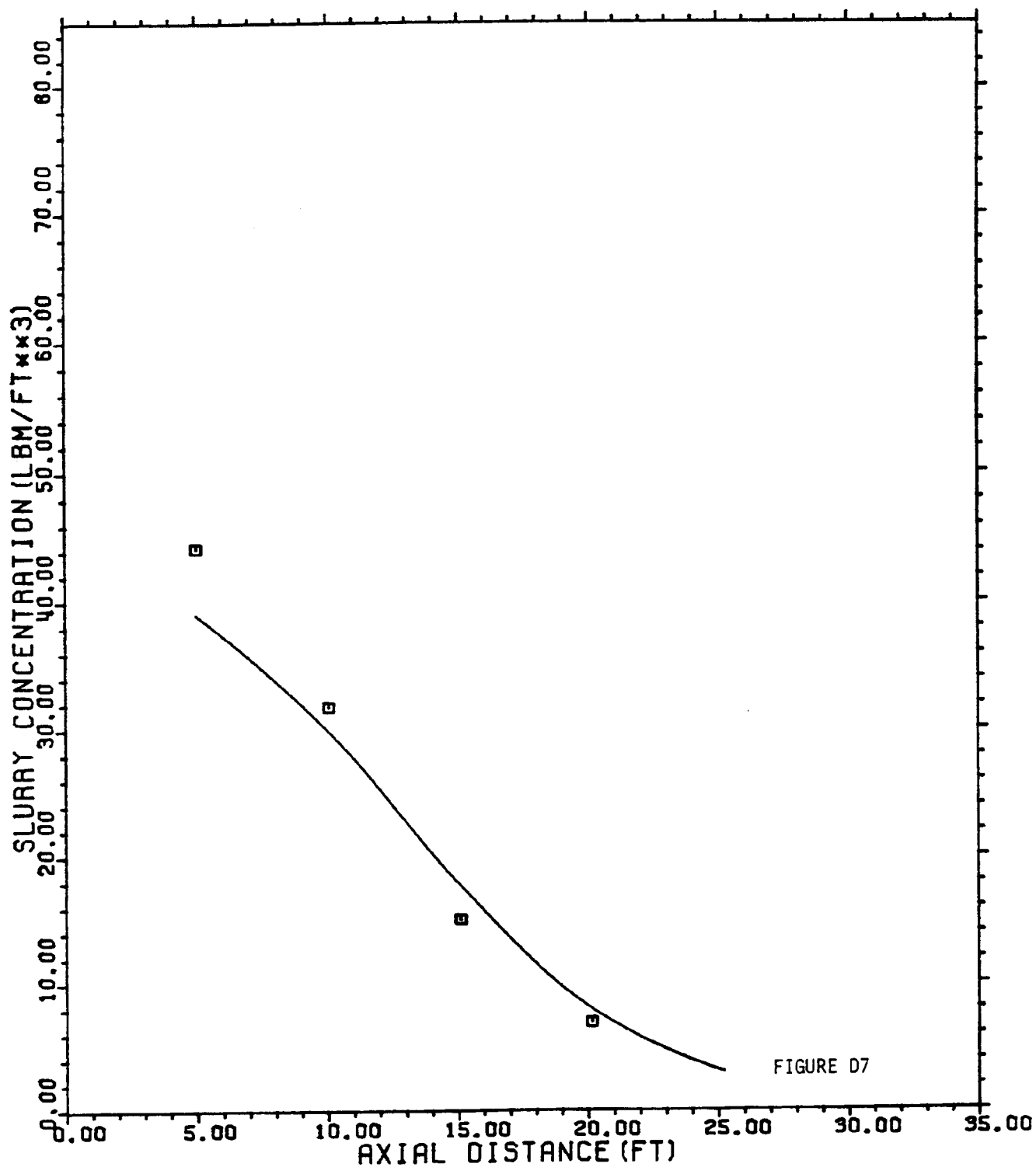
| CONC. VS. L                                                                                                                                                                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT <sup>2</sup> /SEC): .02<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                                |  |



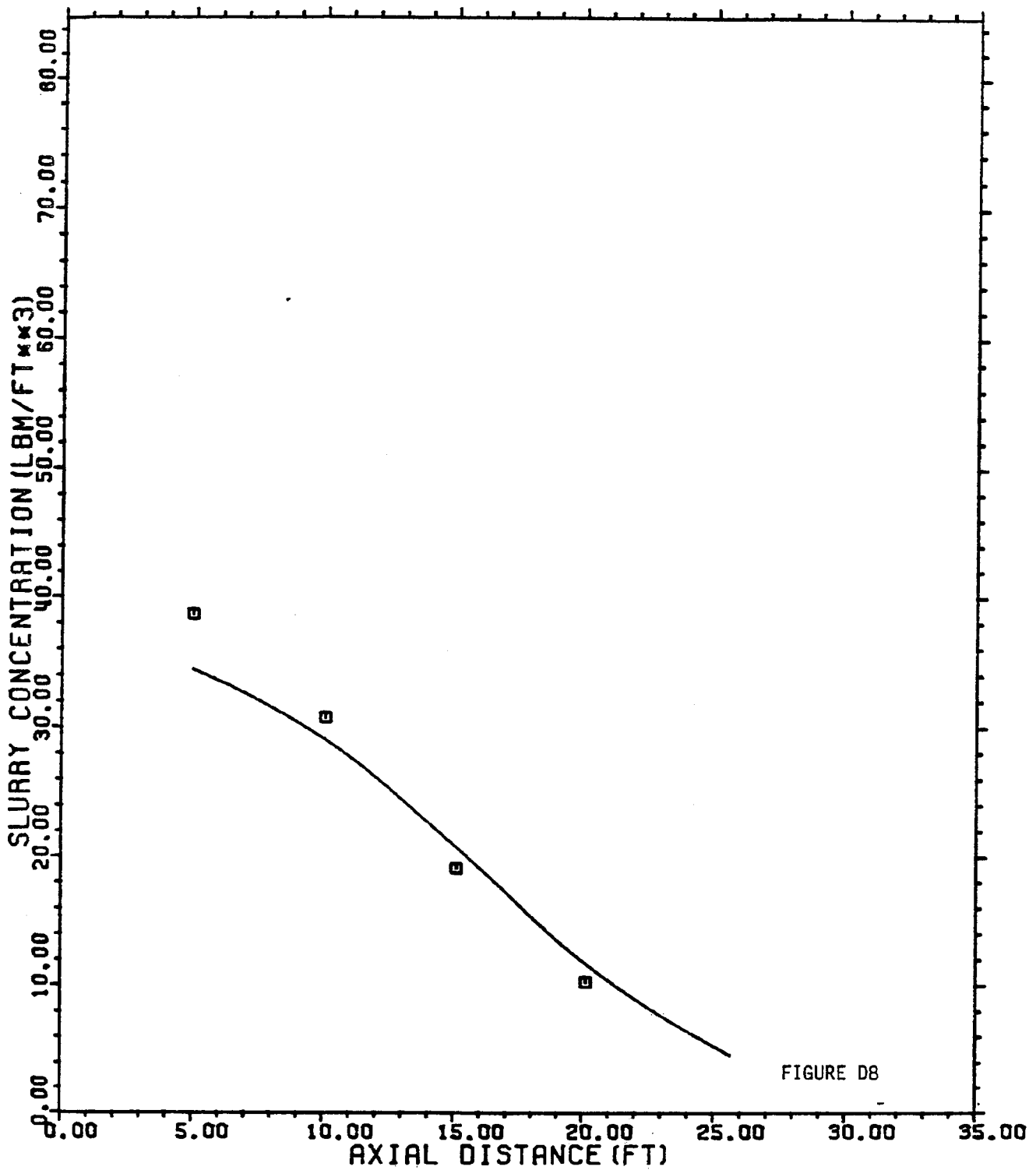
| CONC. VS. L                                                                                                                                                                                             |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT/SEC): .62<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                               |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 6080<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT=2/SEC): .62<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                    |  |



| CONC. VS. L                                                                                                                                                                                                           |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .99<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT <sup>2</sup> /SEC): .62<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                            |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): 1.03<br>FL (FT <sup>2</sup> /SEC): .62<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                                 |  |

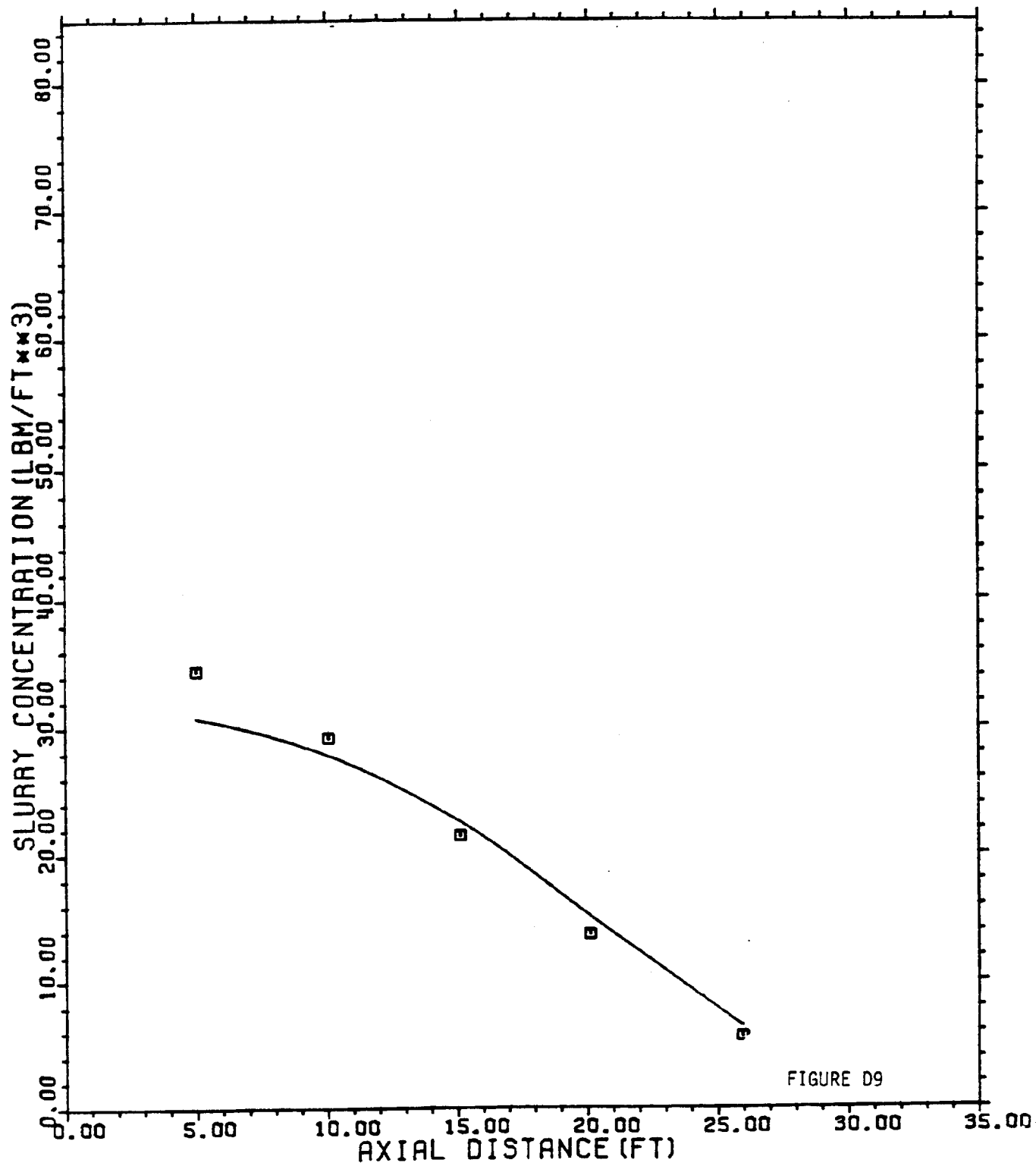
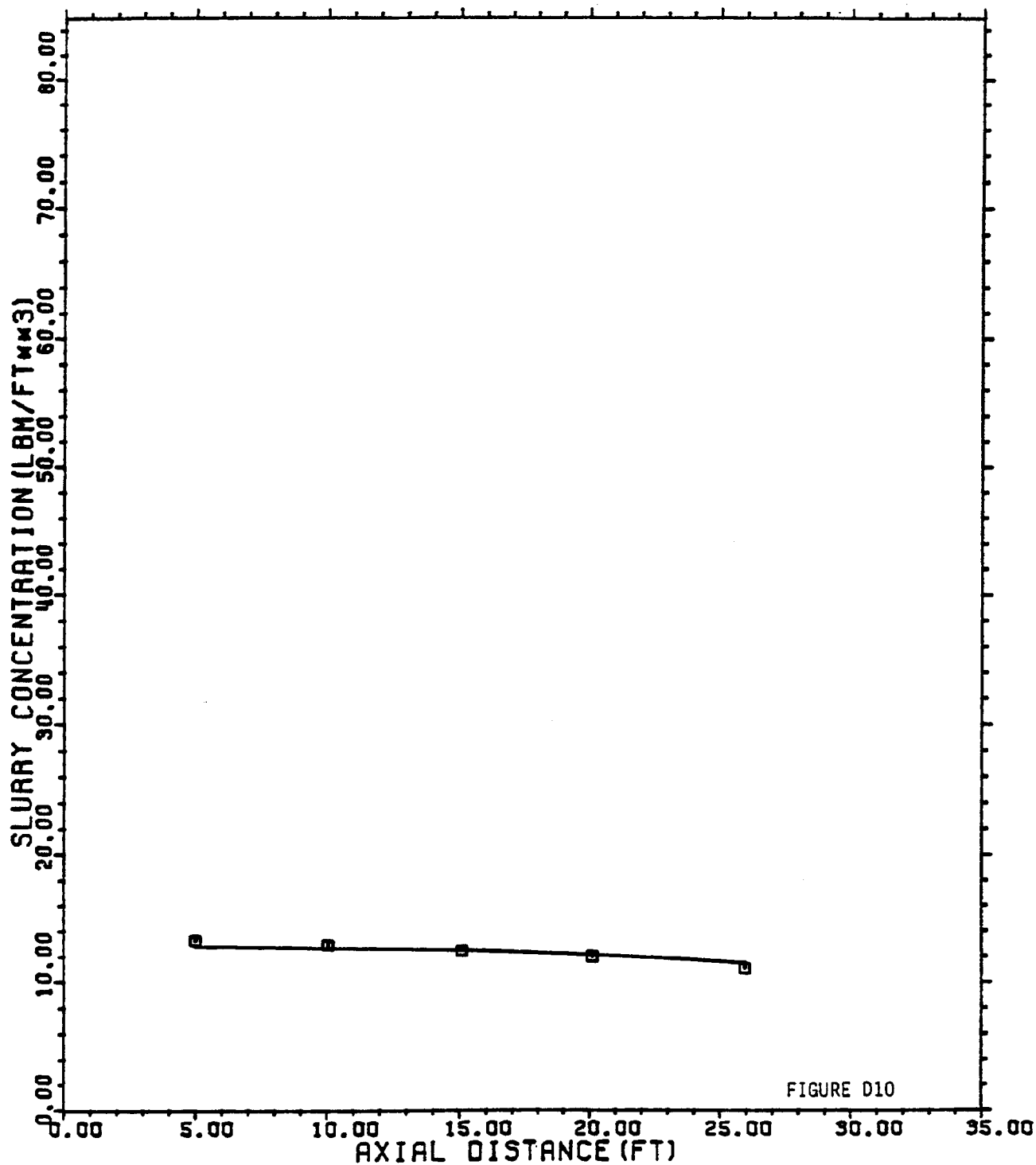


FIGURE D9

| CONC. VS. L                                                                                                                                                                                             |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: WATER<br>SOLID: SAND; MESH SIZE: 8000<br>GAS VELOCITY (FT/SEC): .33<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .82<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .218<br>LIQUID VELOCITY (FT/SEC): .08<br>EL (FT/SEC): .85<br>COLUMN DIAMETER: 12 INCHES | ■ EXPERIMENTAL POINTS<br>— MODEL CURVE |

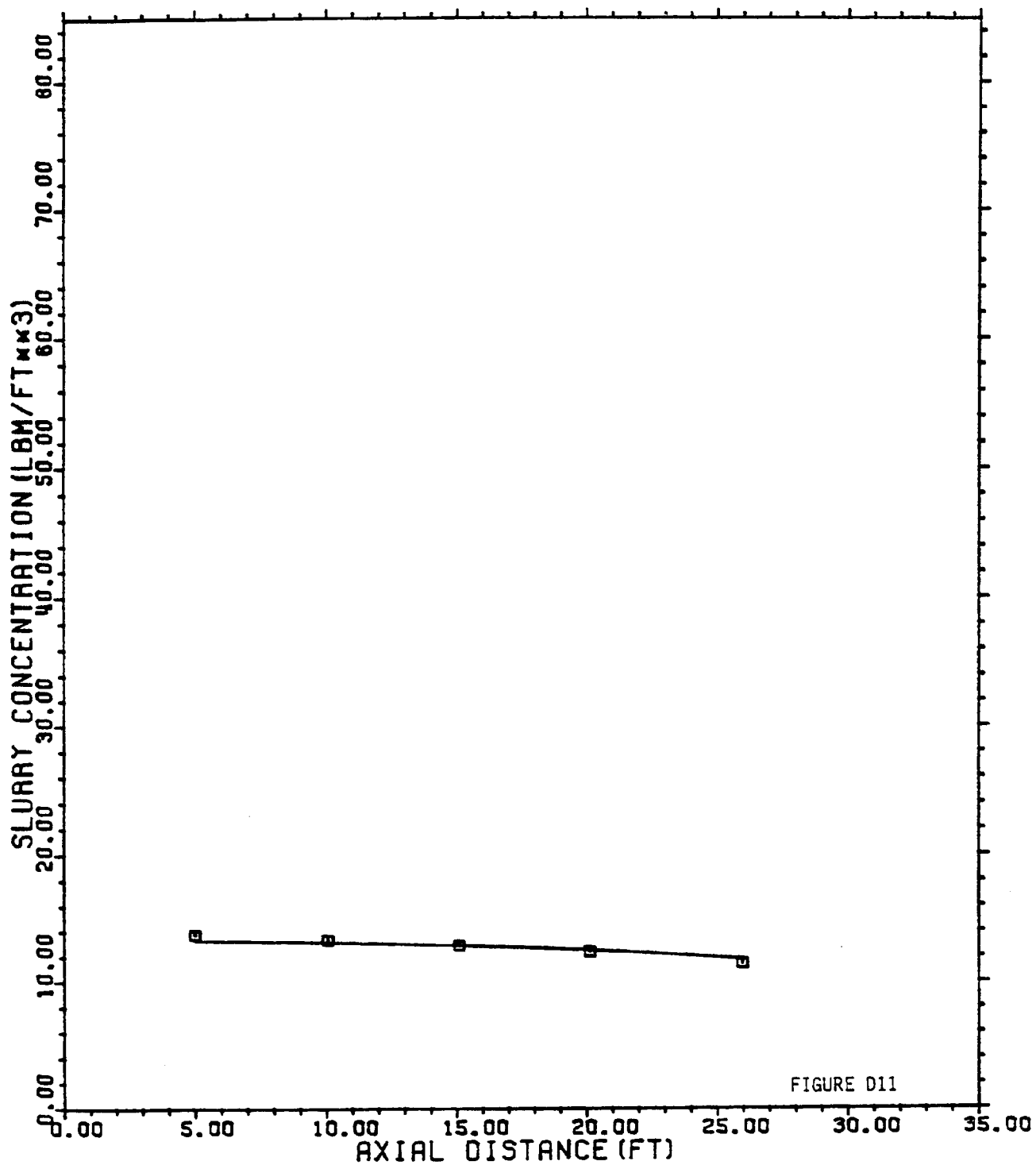


FIGURE D11

| CONC. VS. L                                                                                                                                                                                                                          |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .308<br>LIQUID VELOCITY (FT/SEC): .05<br>Q <sub>L</sub> (FT <sup>3</sup> /SEC): .70<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

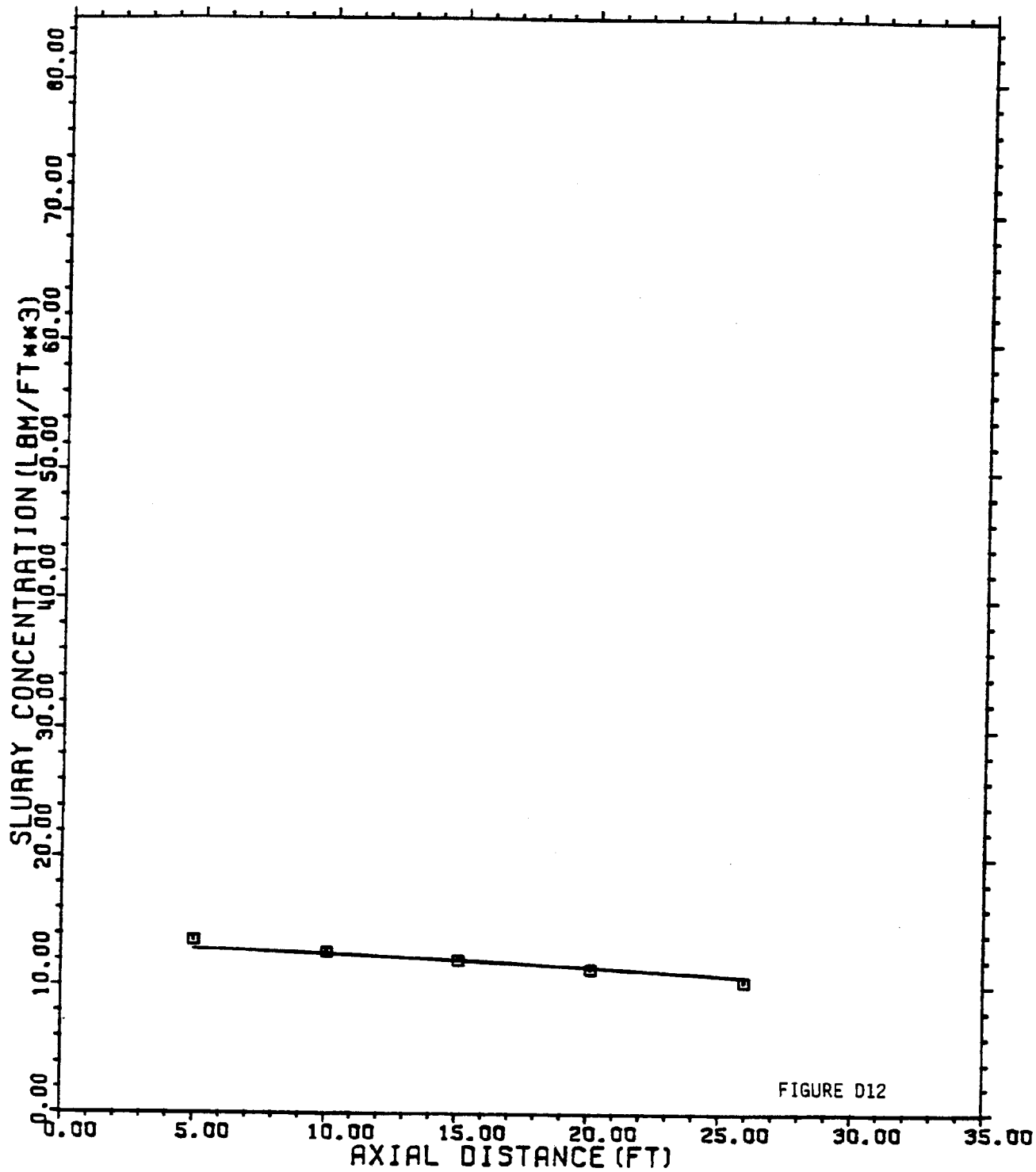
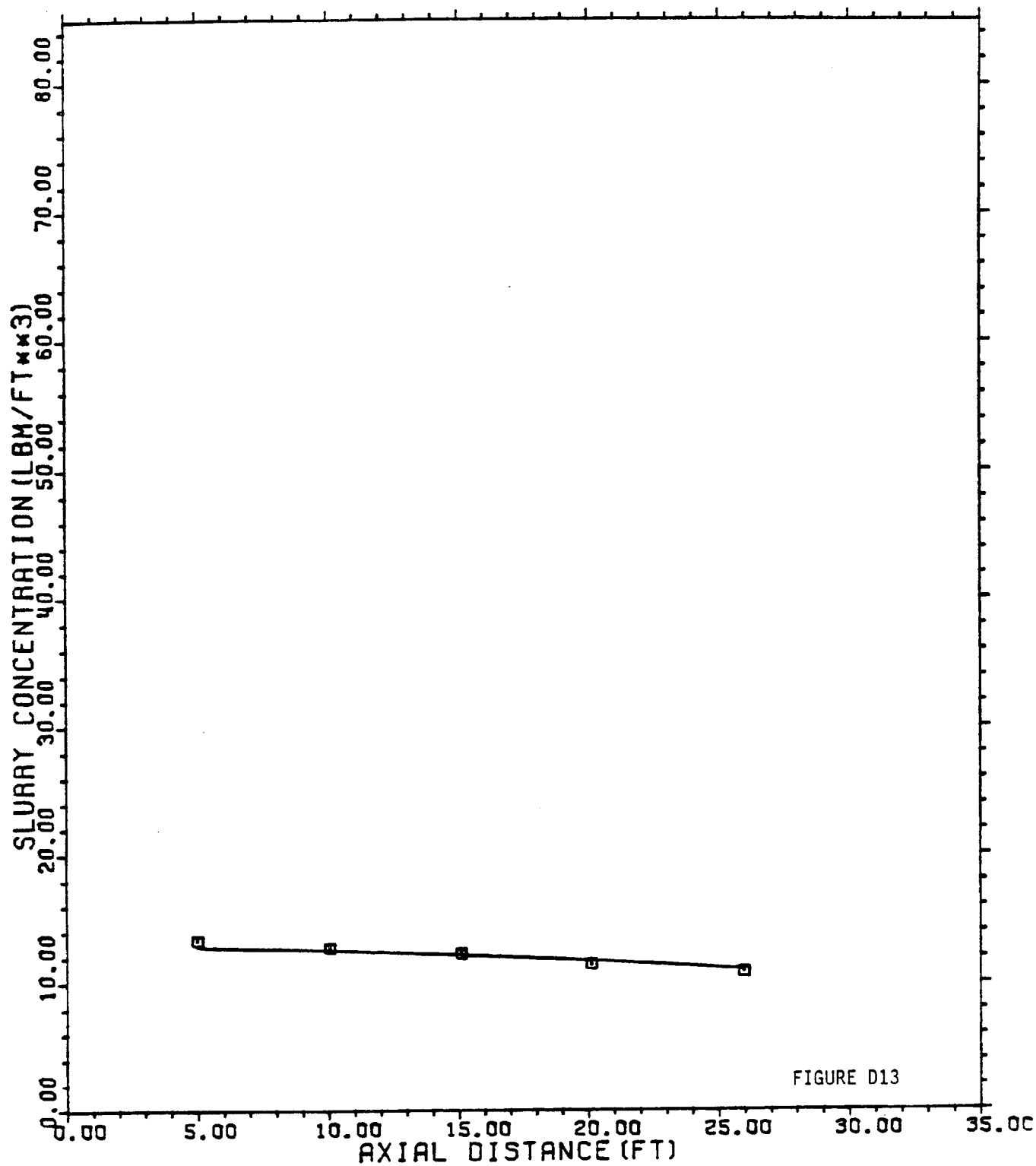
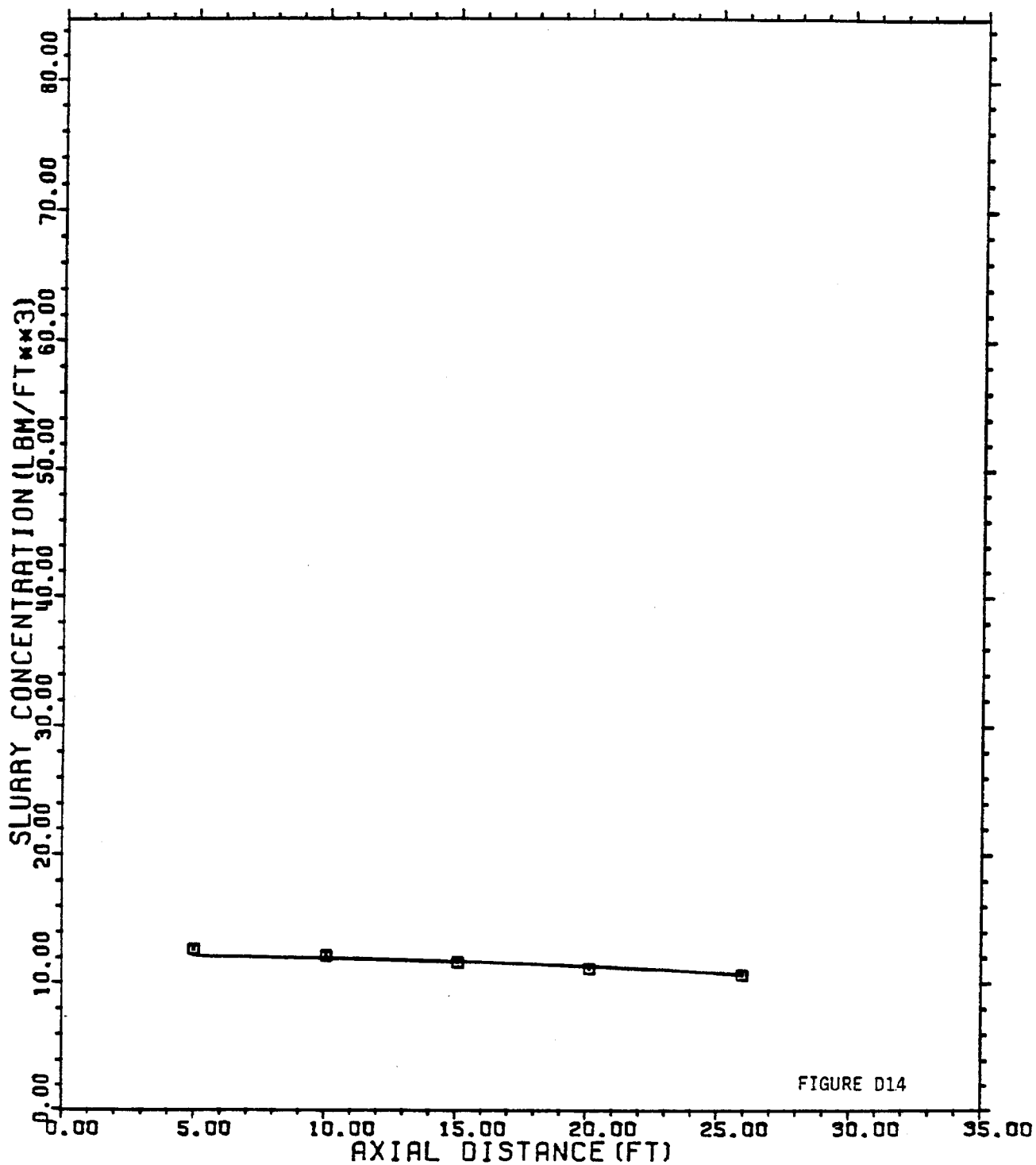


FIGURE D12

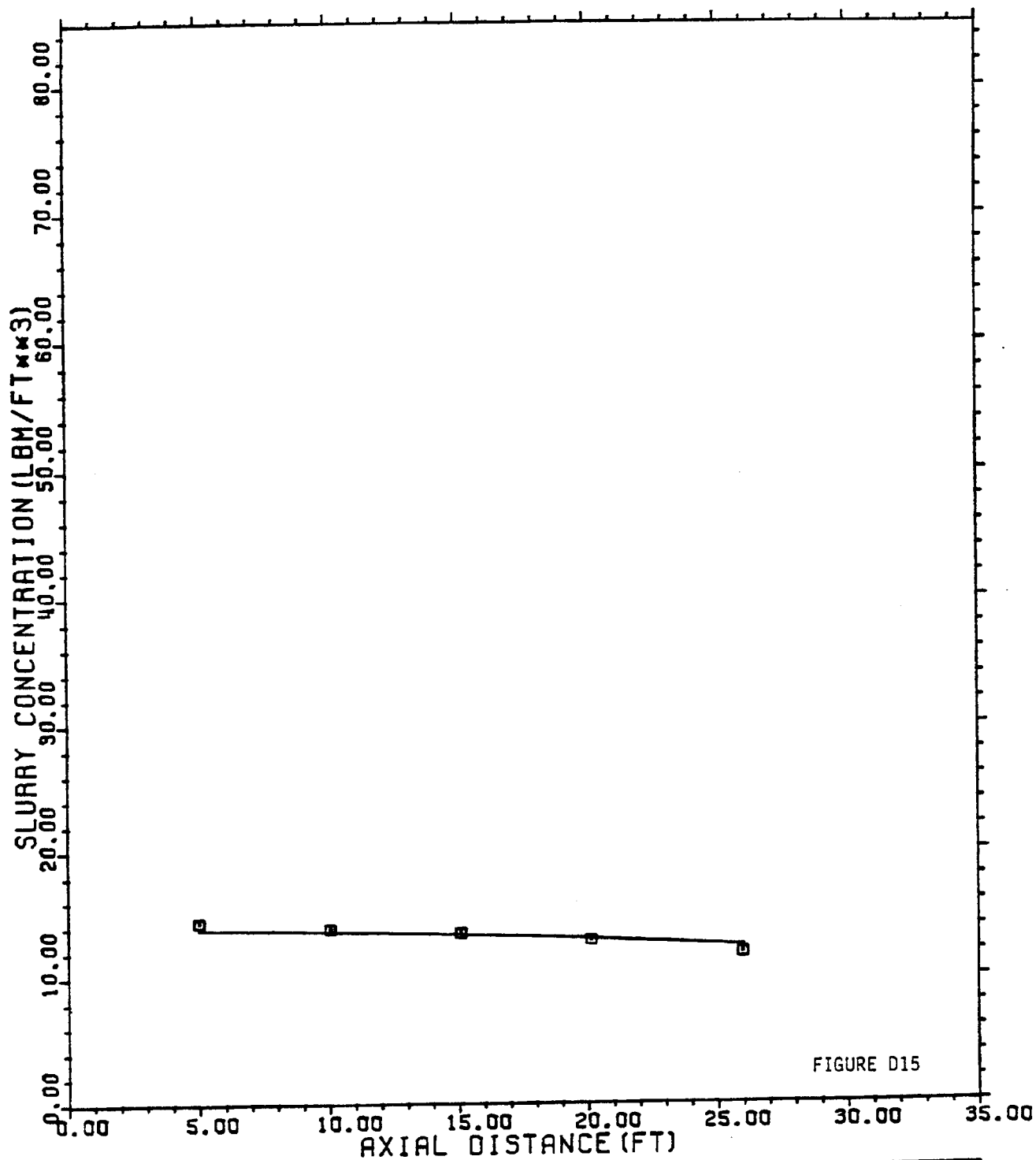
| CONC. VS. L                                                                                                                                                                                                |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .02<br>EL (FT/SEC): .86<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                     |  |



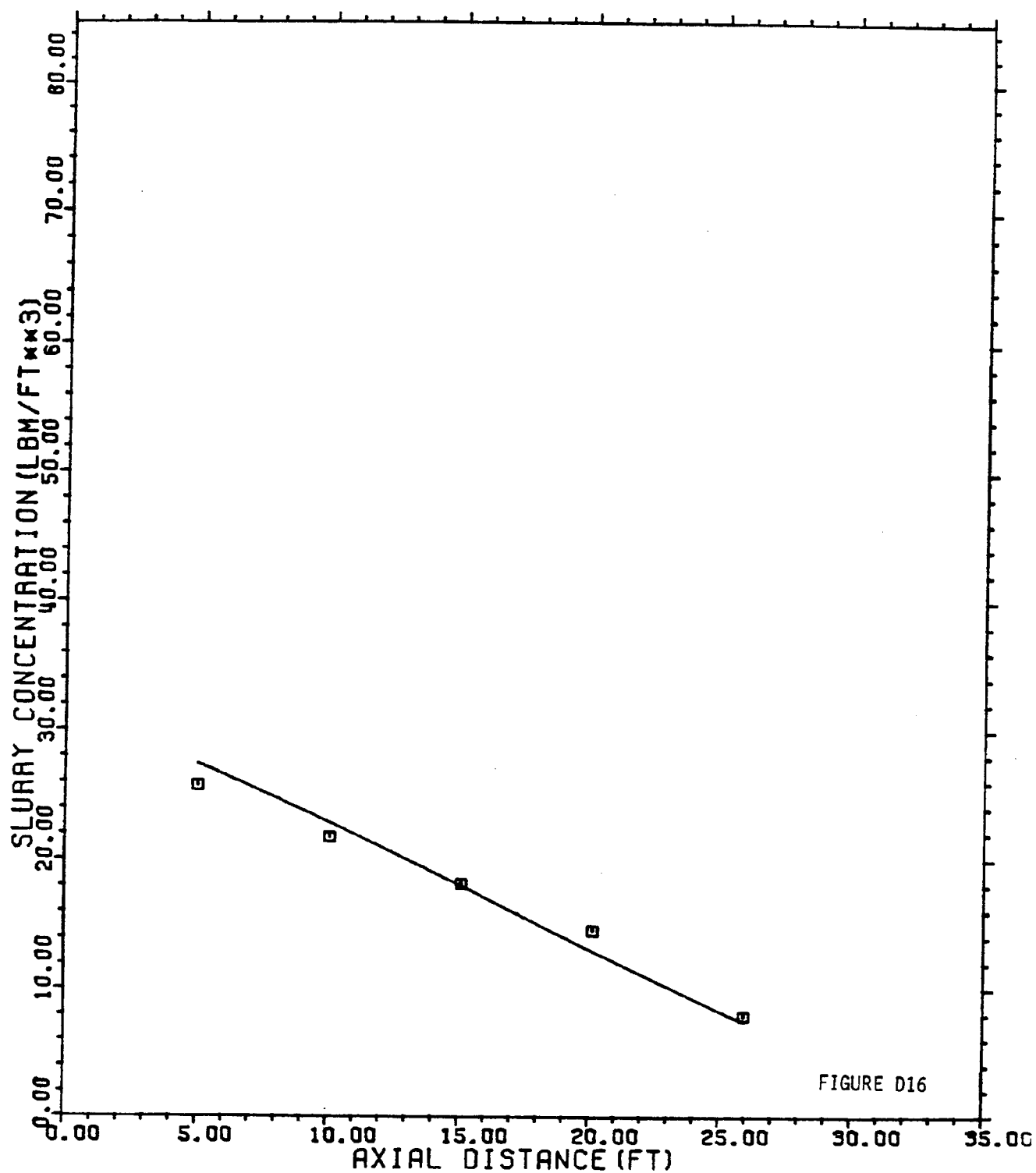
| CONC. VS. L                                                                                                                                                                                                              |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT <sup>2</sup> /SEC): .85<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                   |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT**2/SEC): .85<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                              |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC <sup>2</sup> ): .85<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                               |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .133<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT <sup>2</sup> /SEC): .85<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

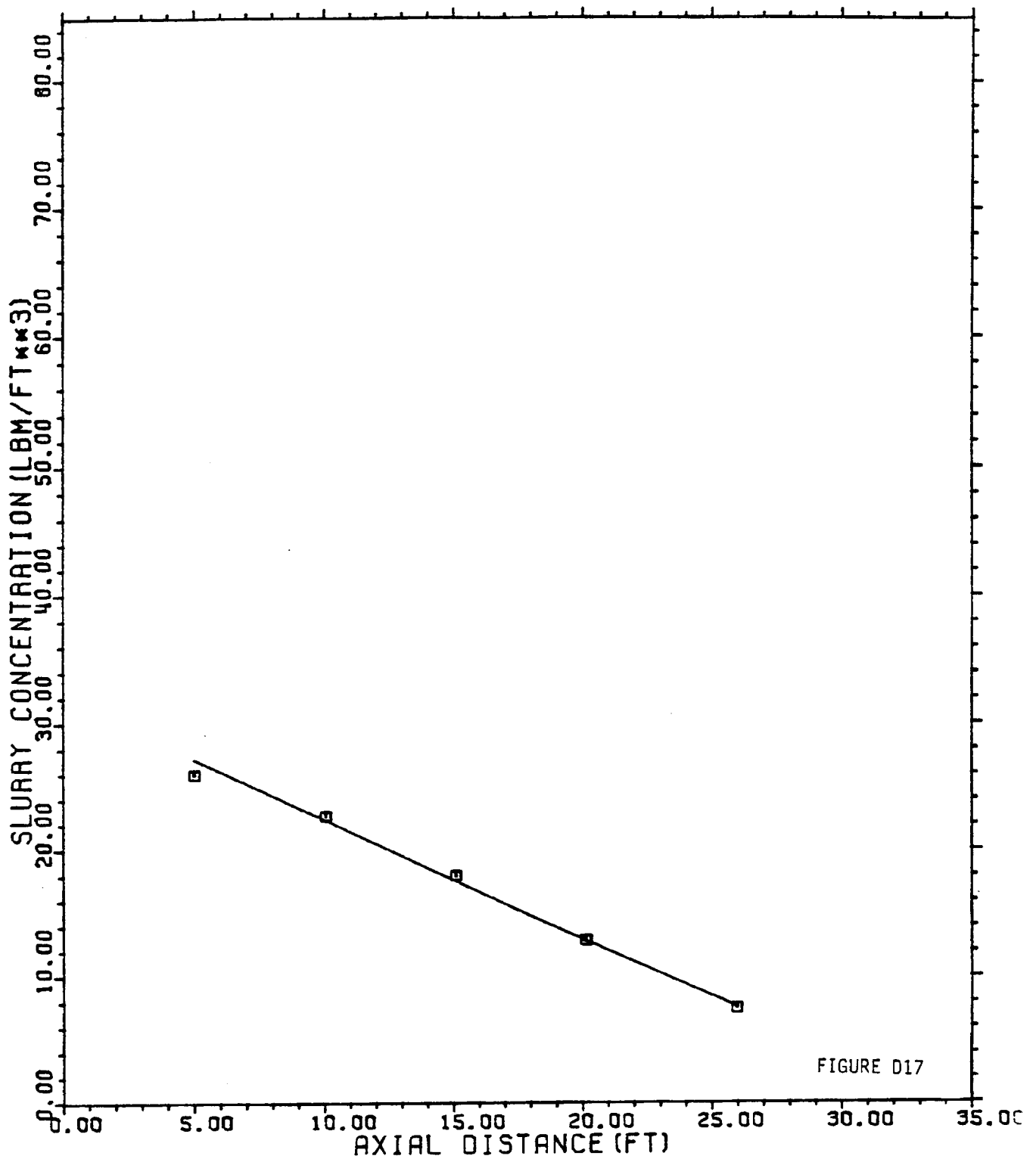


FIGURE D17

| CONC. VS. L                                                                                                                                                                                                 |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .216<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .65<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

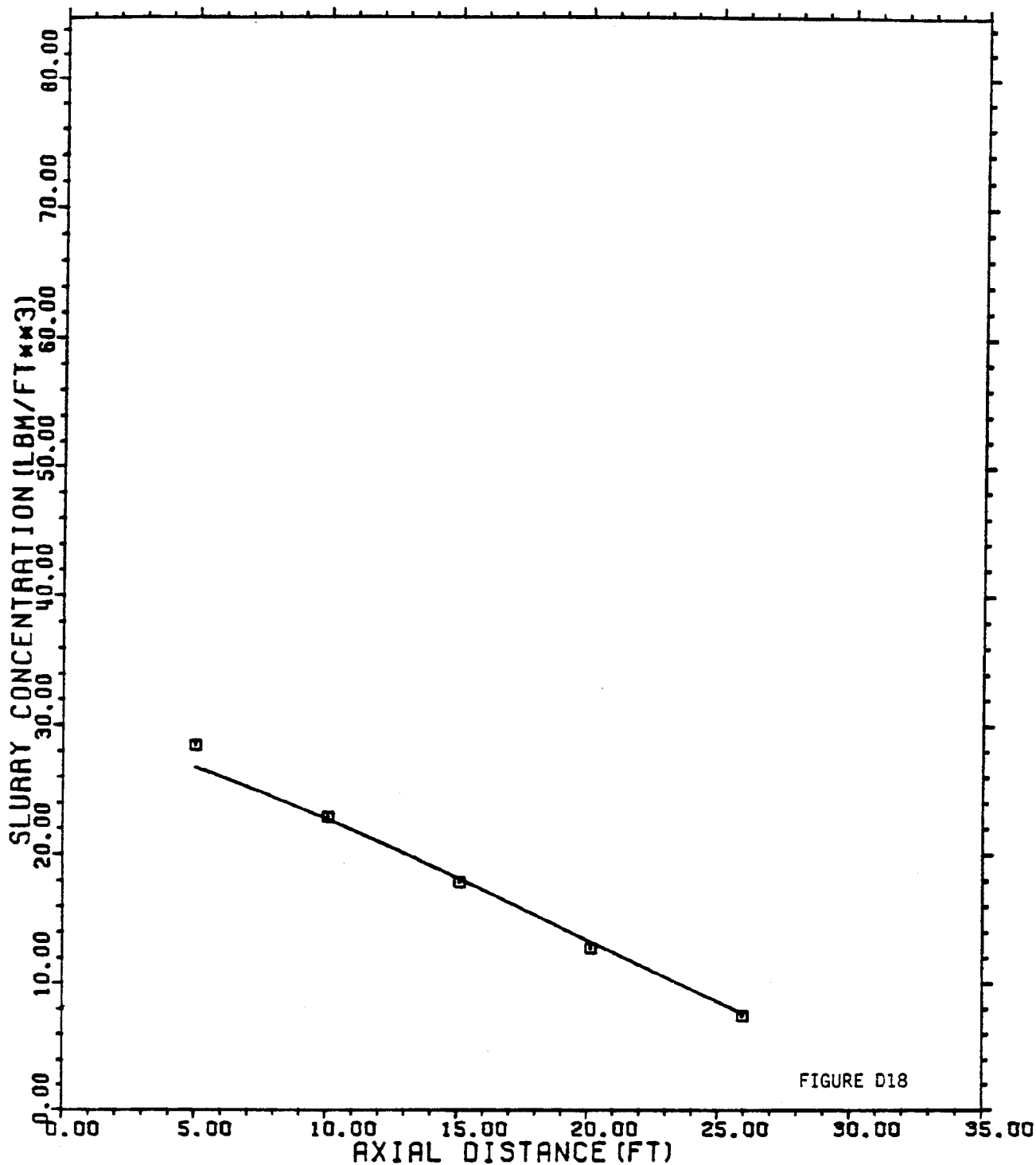


FIGURE D18

| CONC. VS. L                                                                                                                                                                                                 |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .308<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .70<br>COLUMN DIAMETER: 12 INCHES |                                        |
|                                                                                                                                                                                                             | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

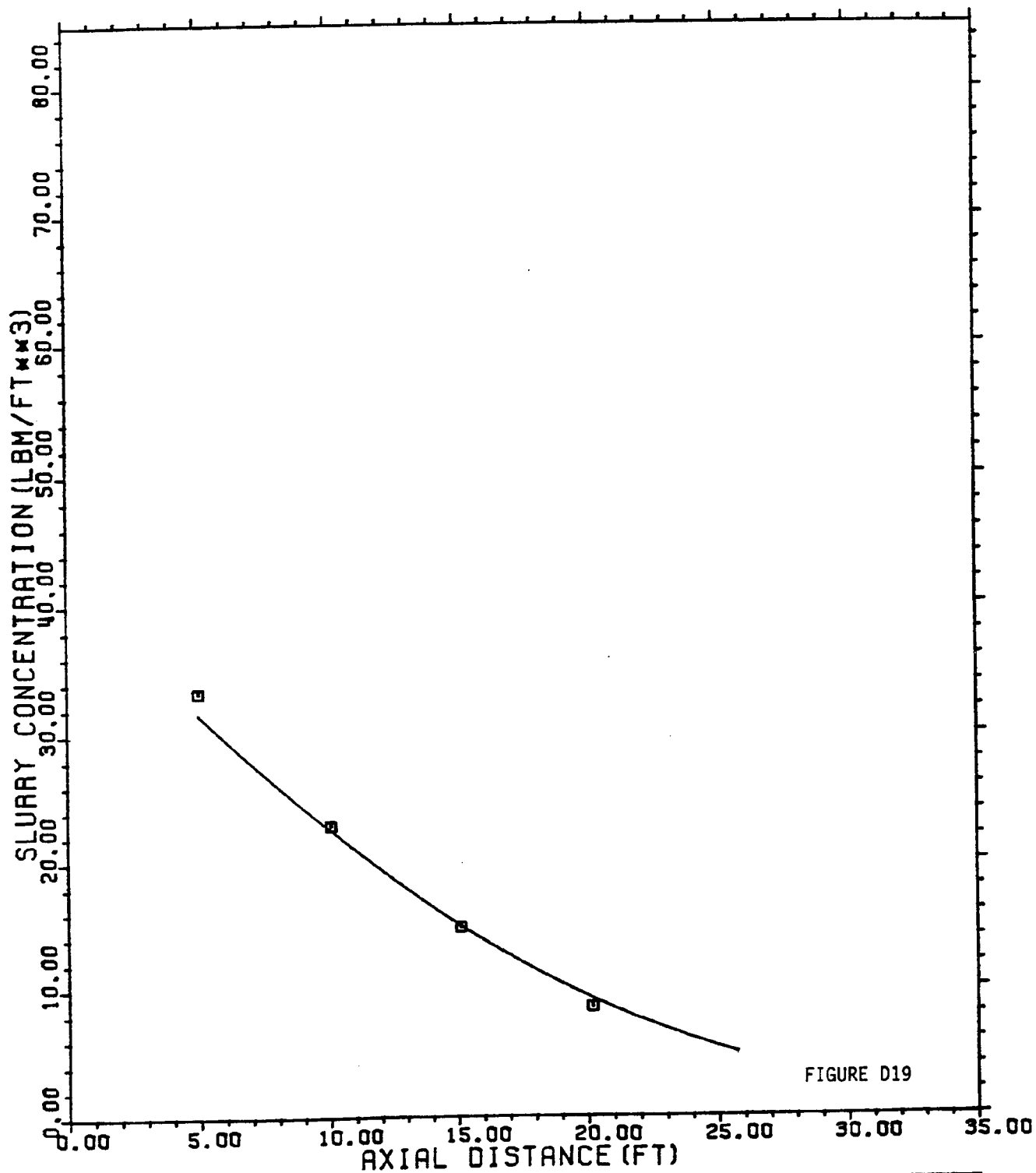
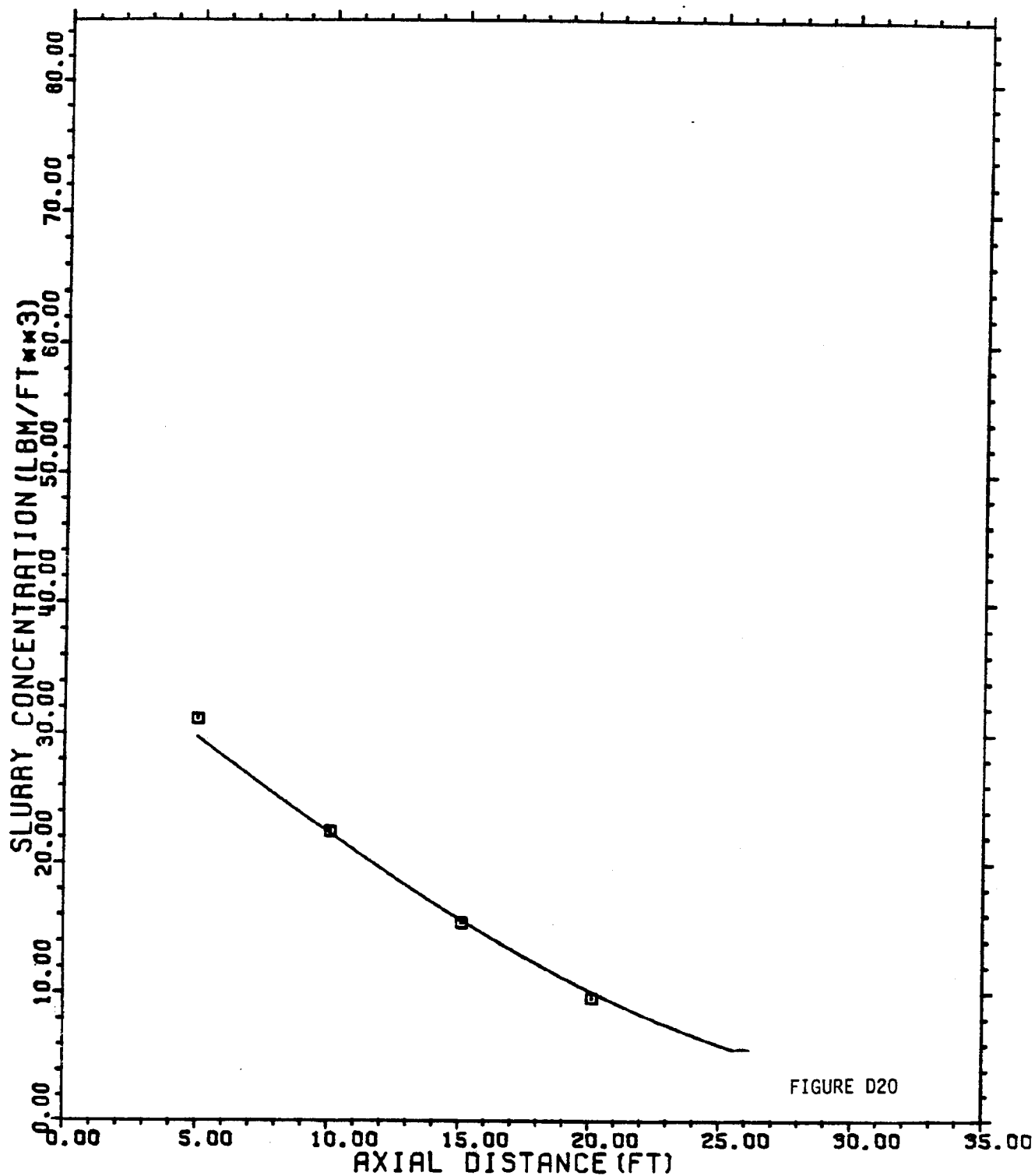
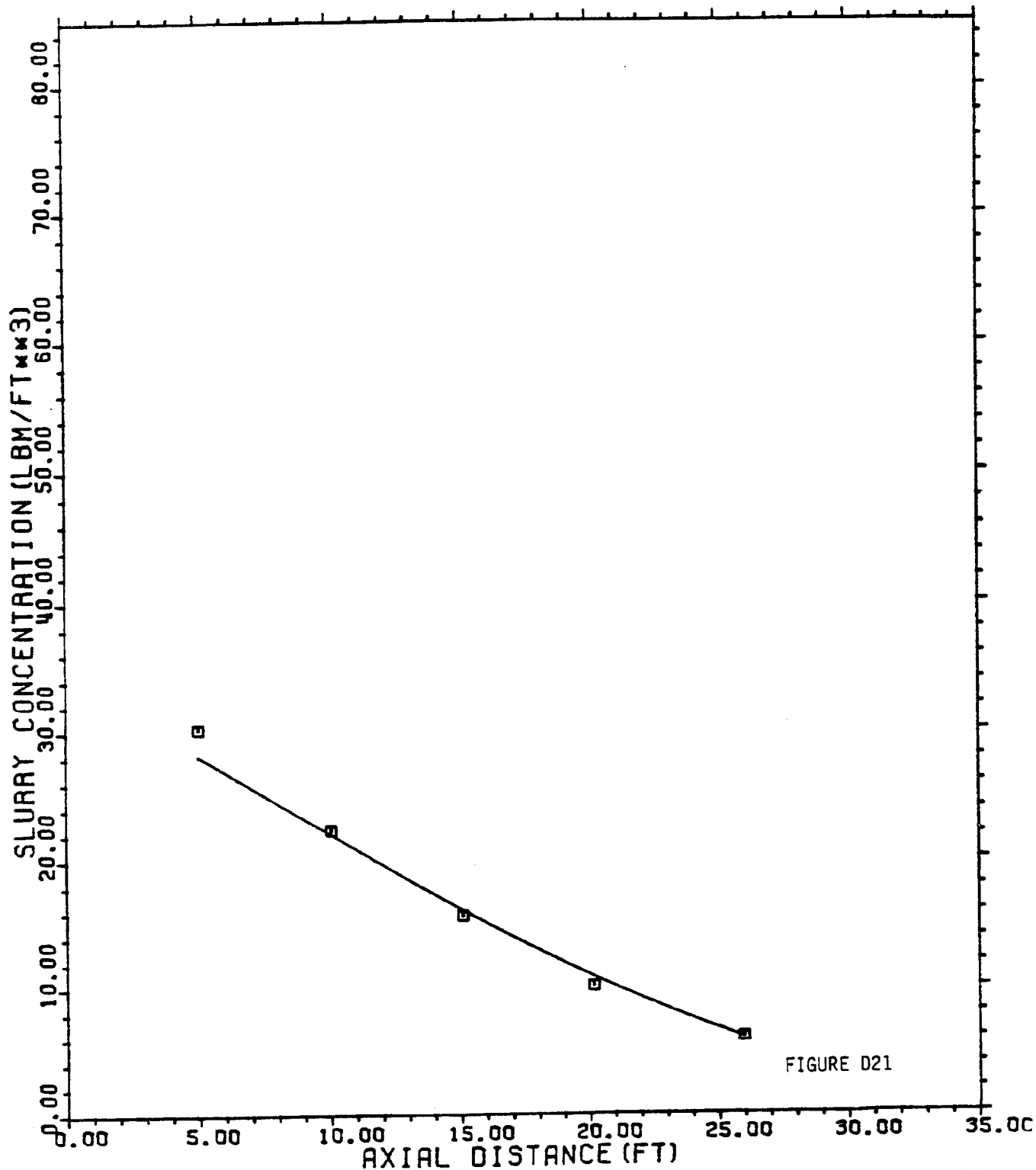


FIGURE D19

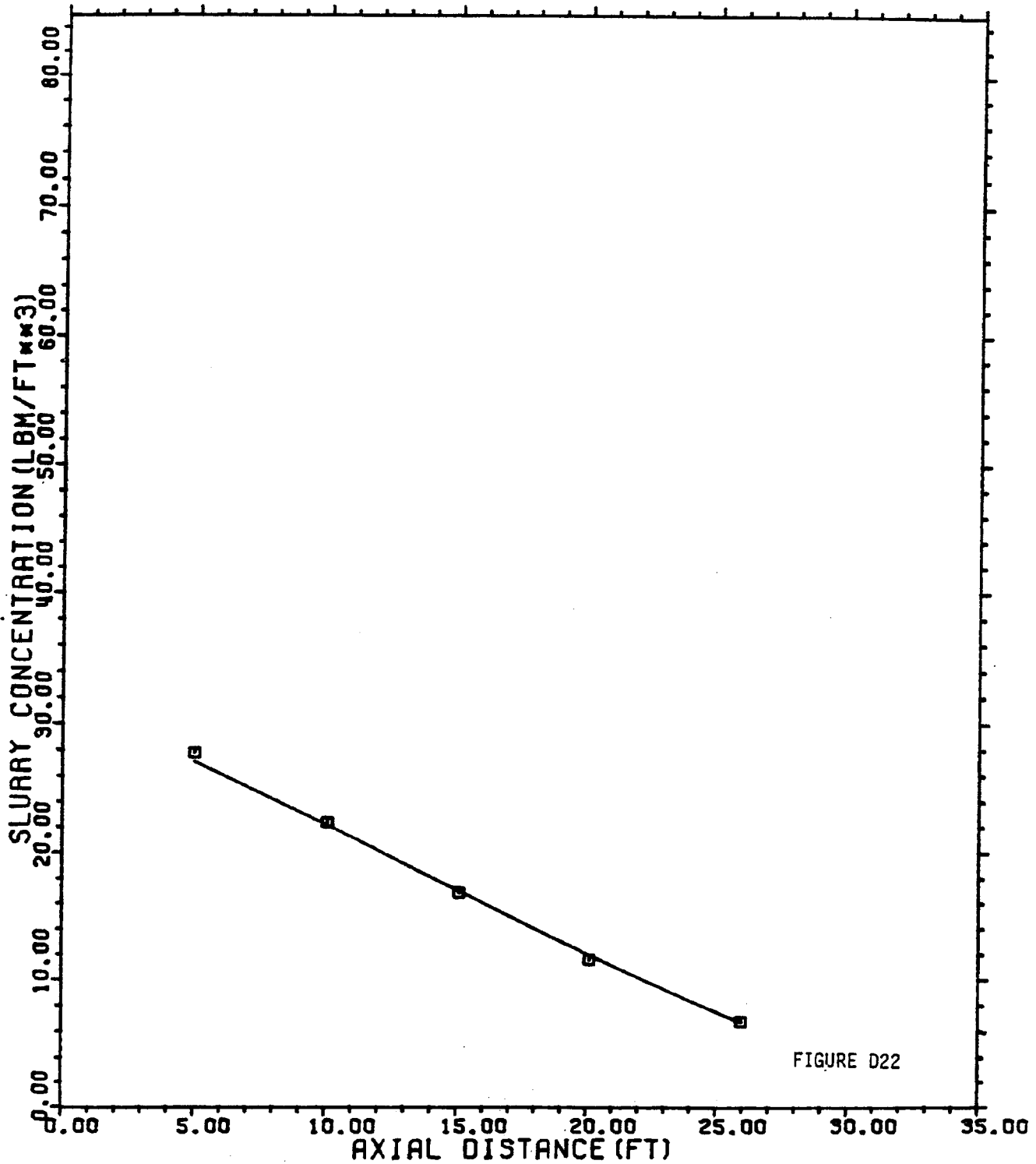
| CONC. VS. L                                                                                                                                                                                                 |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .02<br>EL (FT/SEC): .85<br>COLUMN DIAMETER: 12 INCHES | ■ EXPERIMENTAL POINTS<br>— MODEL CURVE |



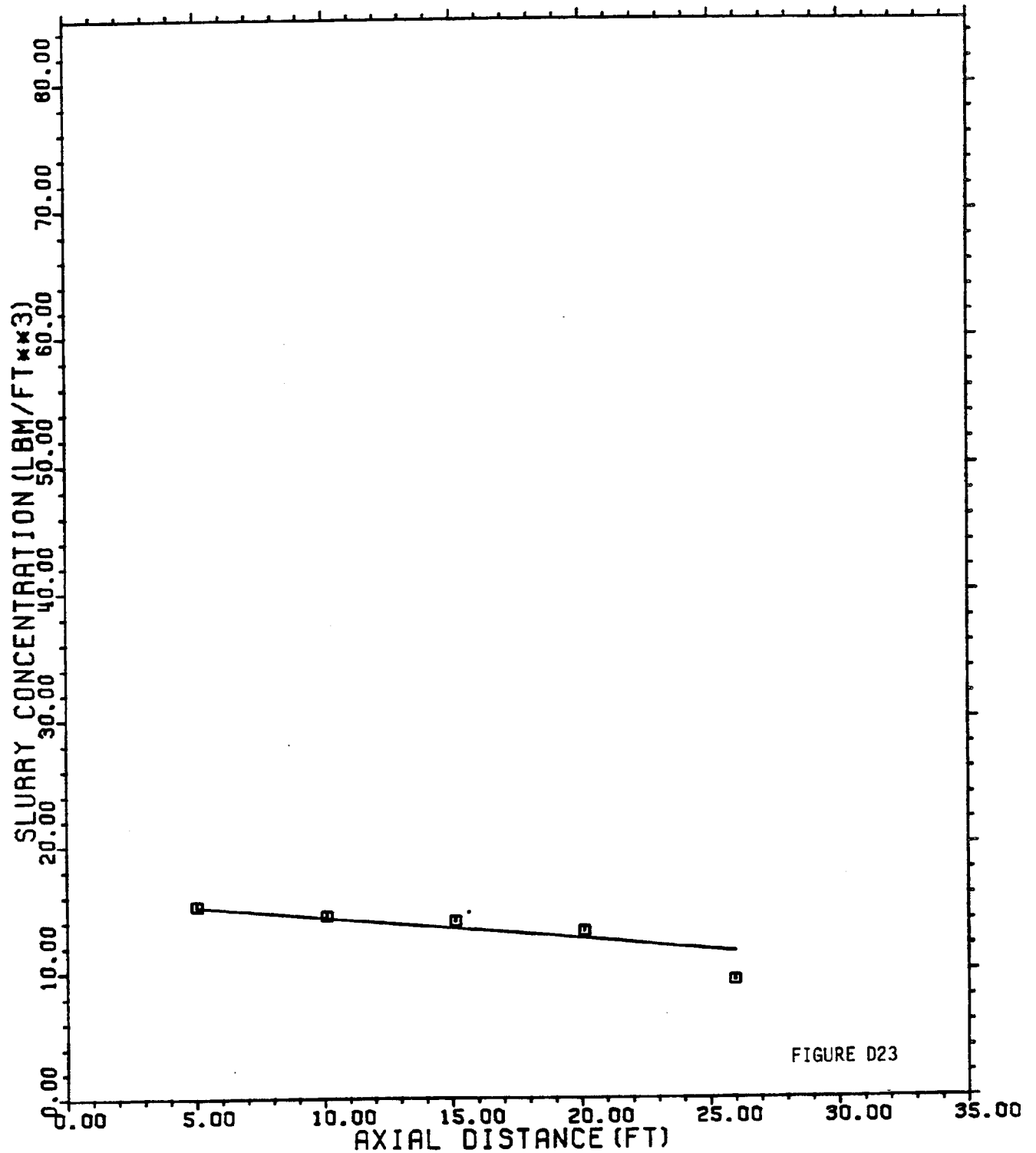
| CONC. VS. L                           |                                                         |
|---------------------------------------|---------------------------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH |                                                         |
| LIQUID: TETRALIN                      |                                                         |
| SOLID: SAND; MESH SIZE: 6080          |                                                         |
| GAS VELOCITY (FT/SEC): .382           |                                                         |
| LIQUID VELOCITY (FT/SEC): .03         |                                                         |
| EL (FT/SEC): .86                      |                                                         |
| COLUMN DIAMETER: 12 INCHES            |                                                         |
| <div> <div></div> </div>              | <div>EXPERIMENTAL POINTS</div> <div>— MODEL CURVE</div> |



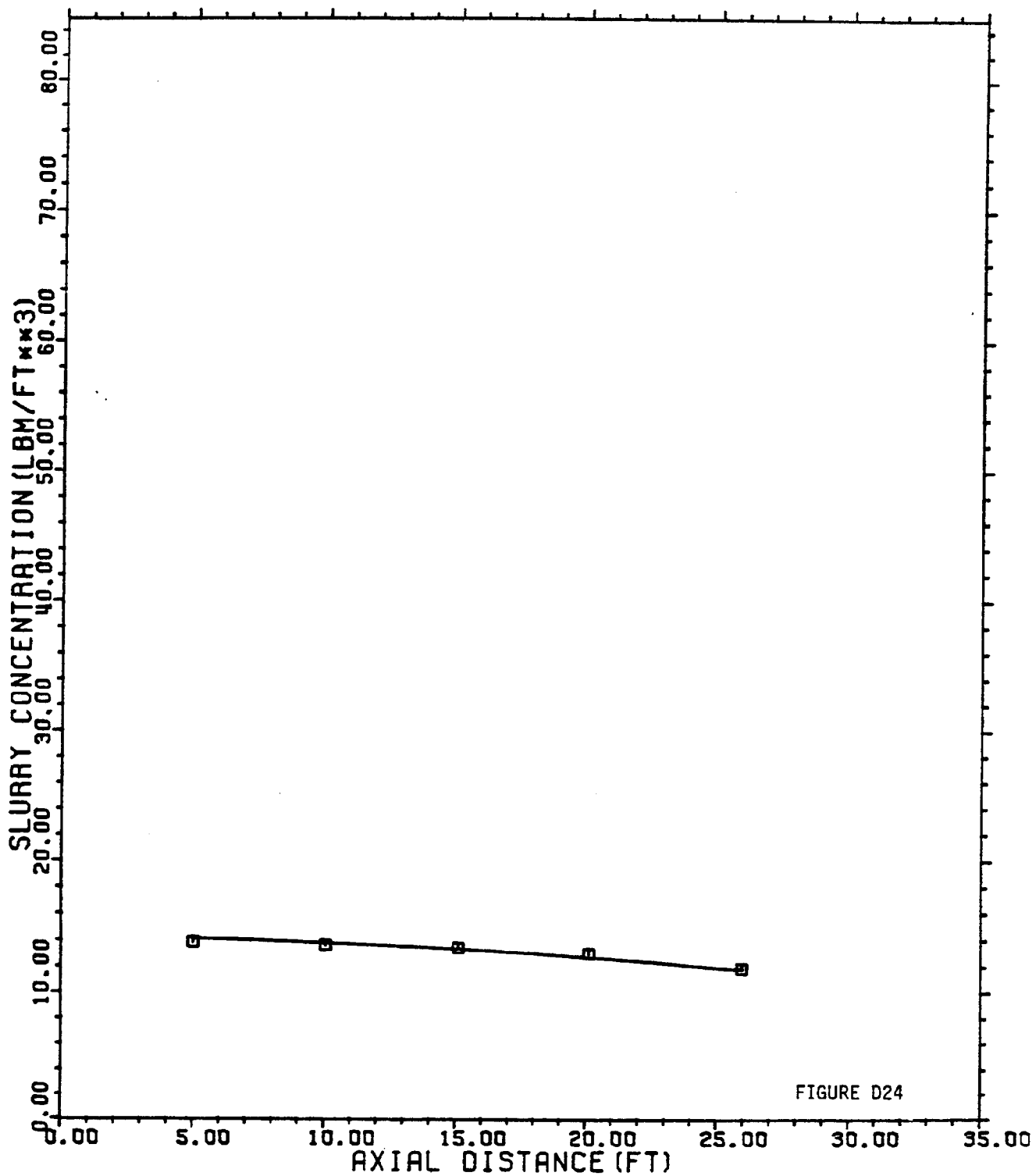
| CONC. VS. L                                                                                                                                                                                                   |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND; MESH SIZE: 6080<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .04<br>EL (FT=2/SEC): .85<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



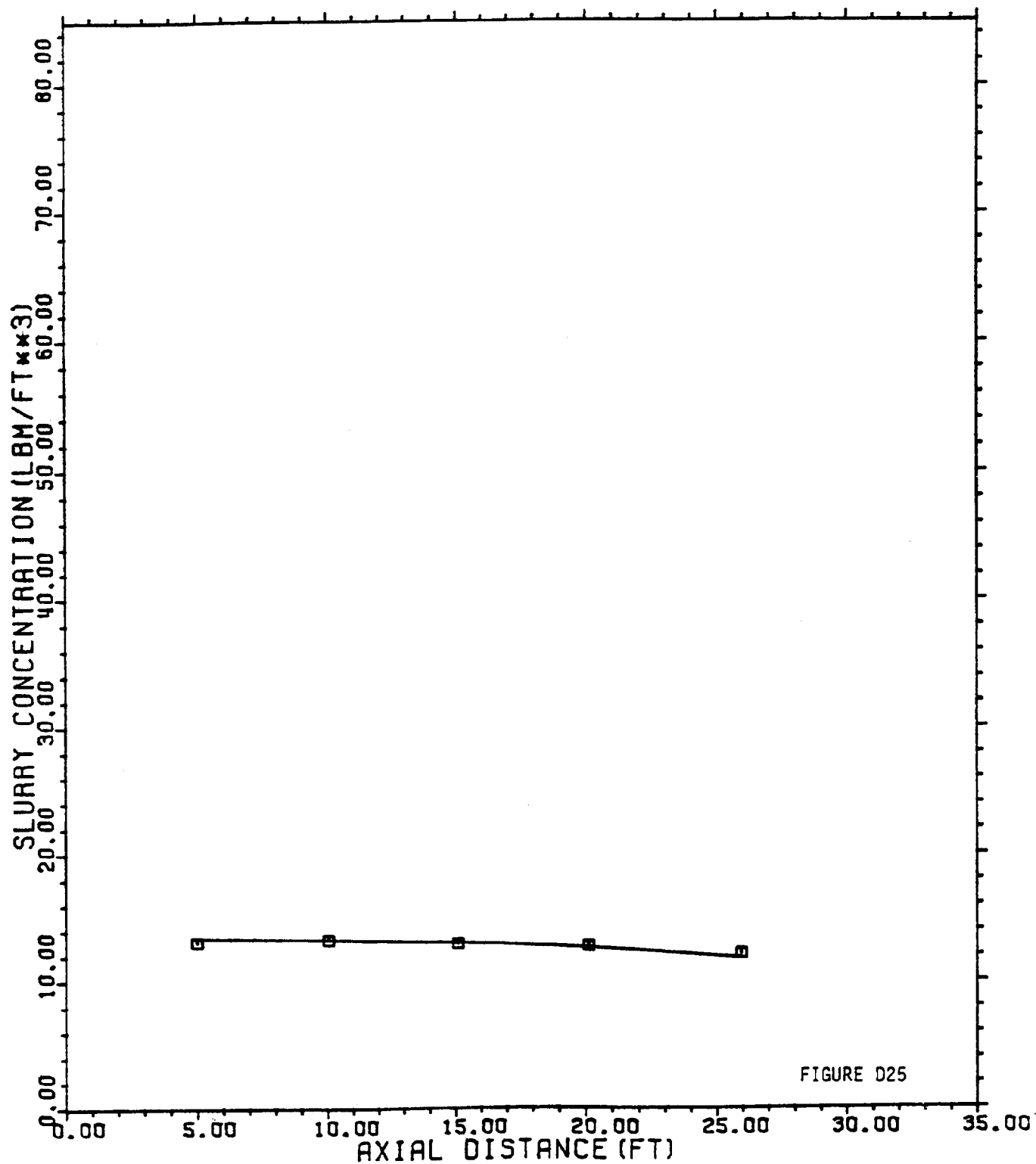
| CONC. VS. L                                                                                                                                                                     |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: TETRALIN<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .392<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT=2/SEC): .85 |  |
| ■ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                          |  |



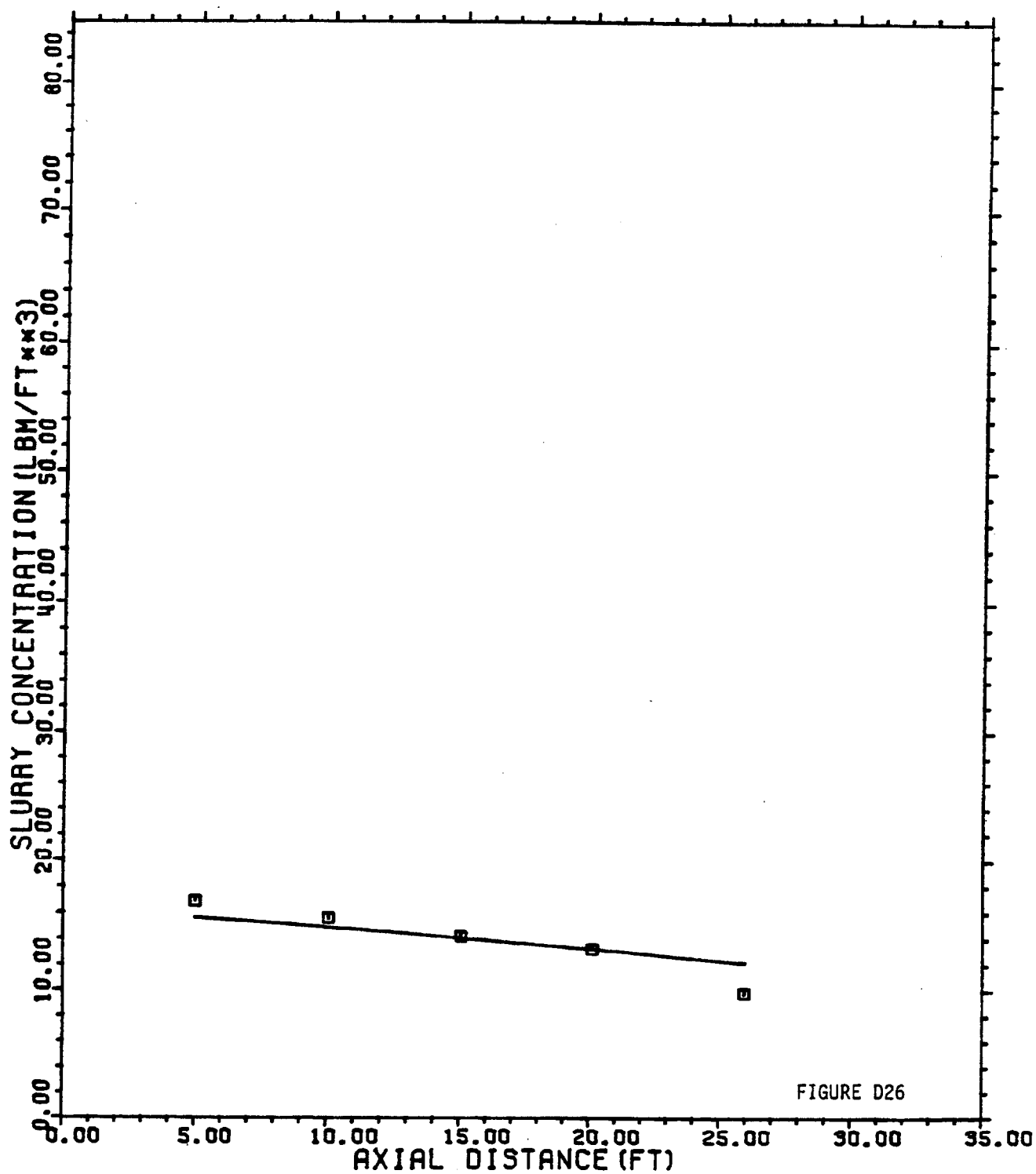
| CONC. VS. L                                                                                                                                                                                                  |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .05<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT/SEC): .438<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



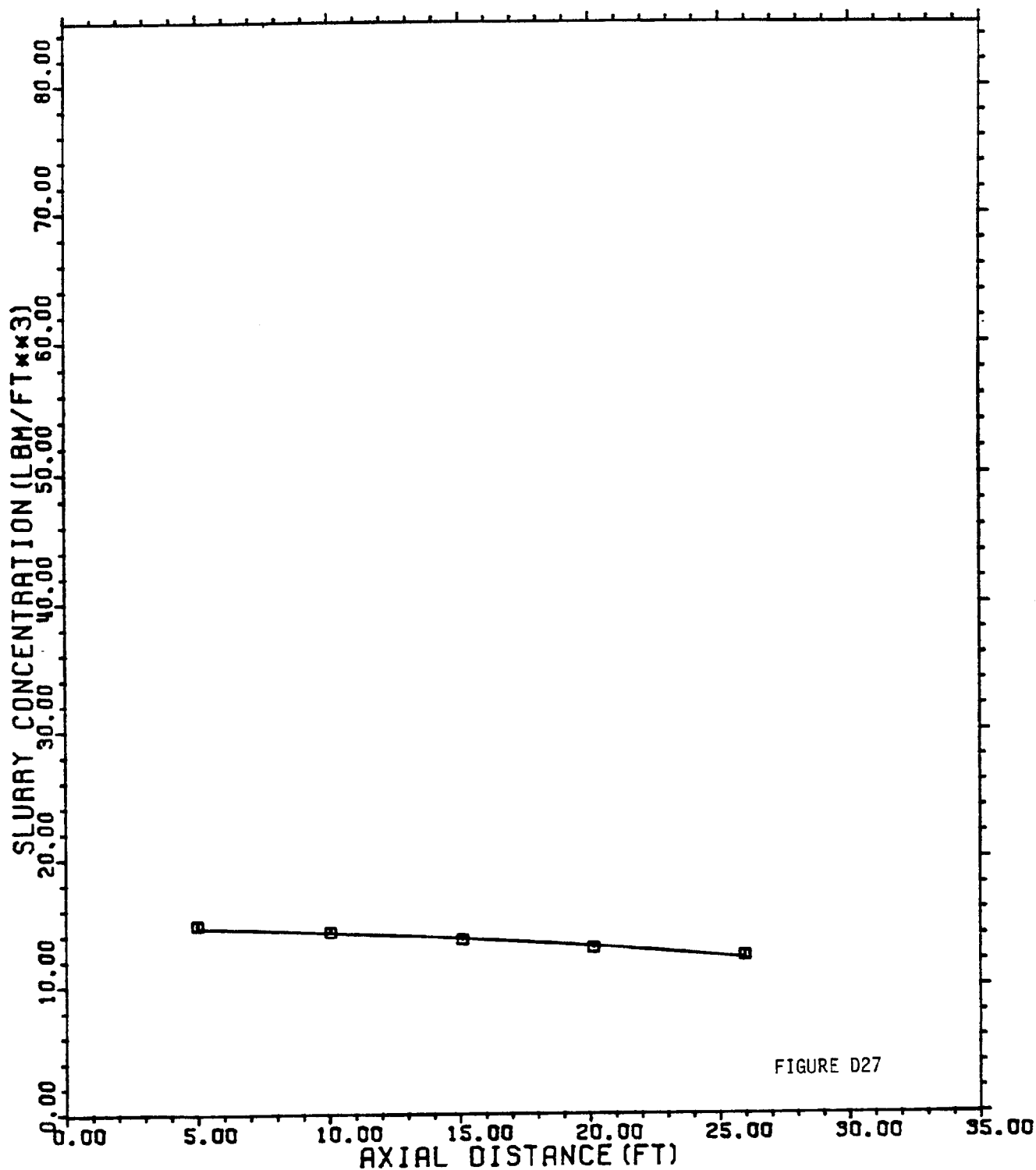
| CONC. VS. L                                                                                                                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND; MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .06<br>LIQUID VELOCITY (FT/SEC): .09<br>EL (FT=2/SEC): .438<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                         |  |



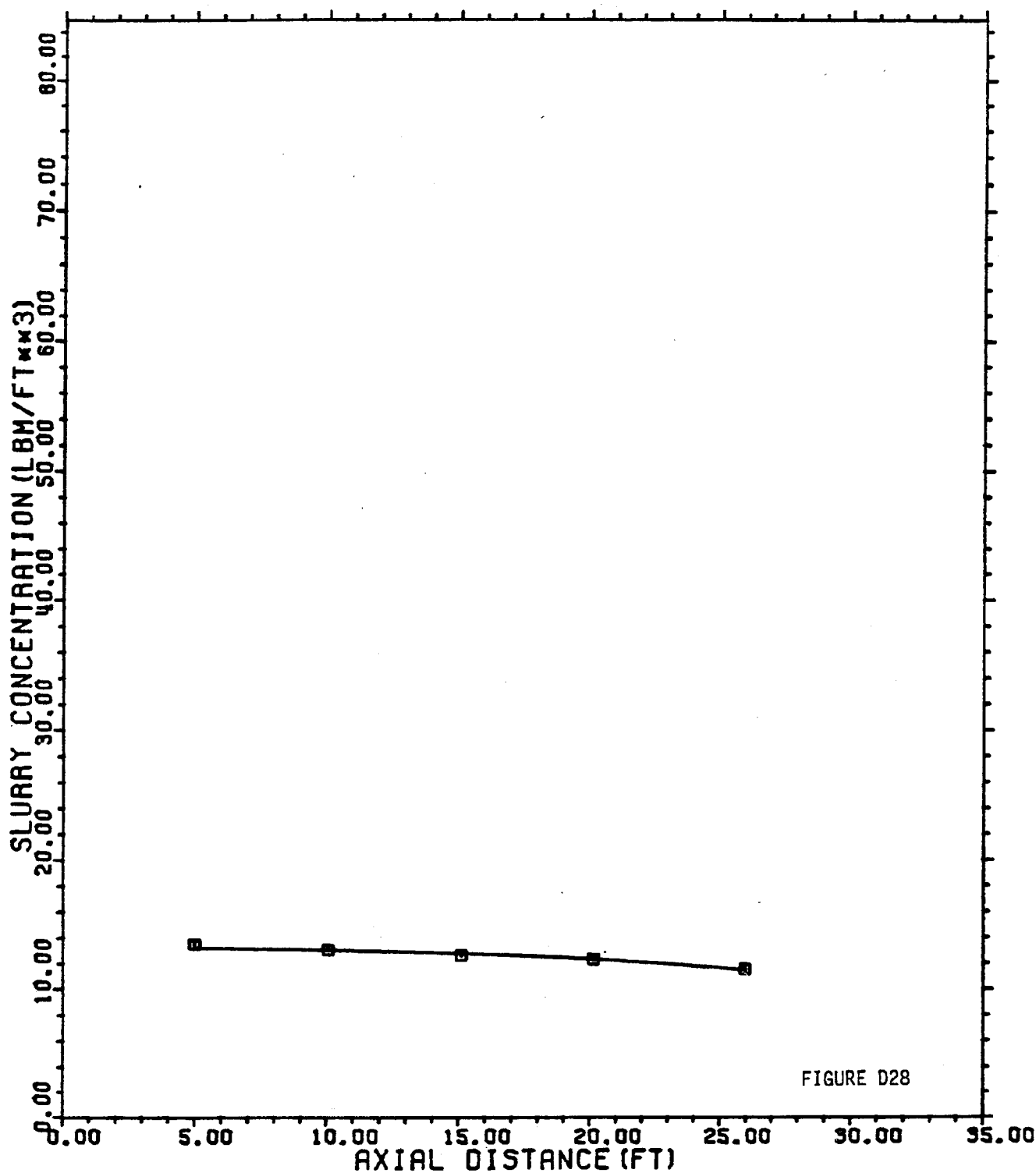
| CONC. VS. L                                                                                                                                                                                                    |                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .05<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT=2/SEC): .438<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .200<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT/SEC): .500<br>COLUMN DIAMETER: 12 INCHES |  |
| ■ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                        |  |



| CONC. VS. L                                                                                                                                                                                                               |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .197<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT/SEC <sup>2</sup> ): .688<br>PIPE DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                   |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .200<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .600<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

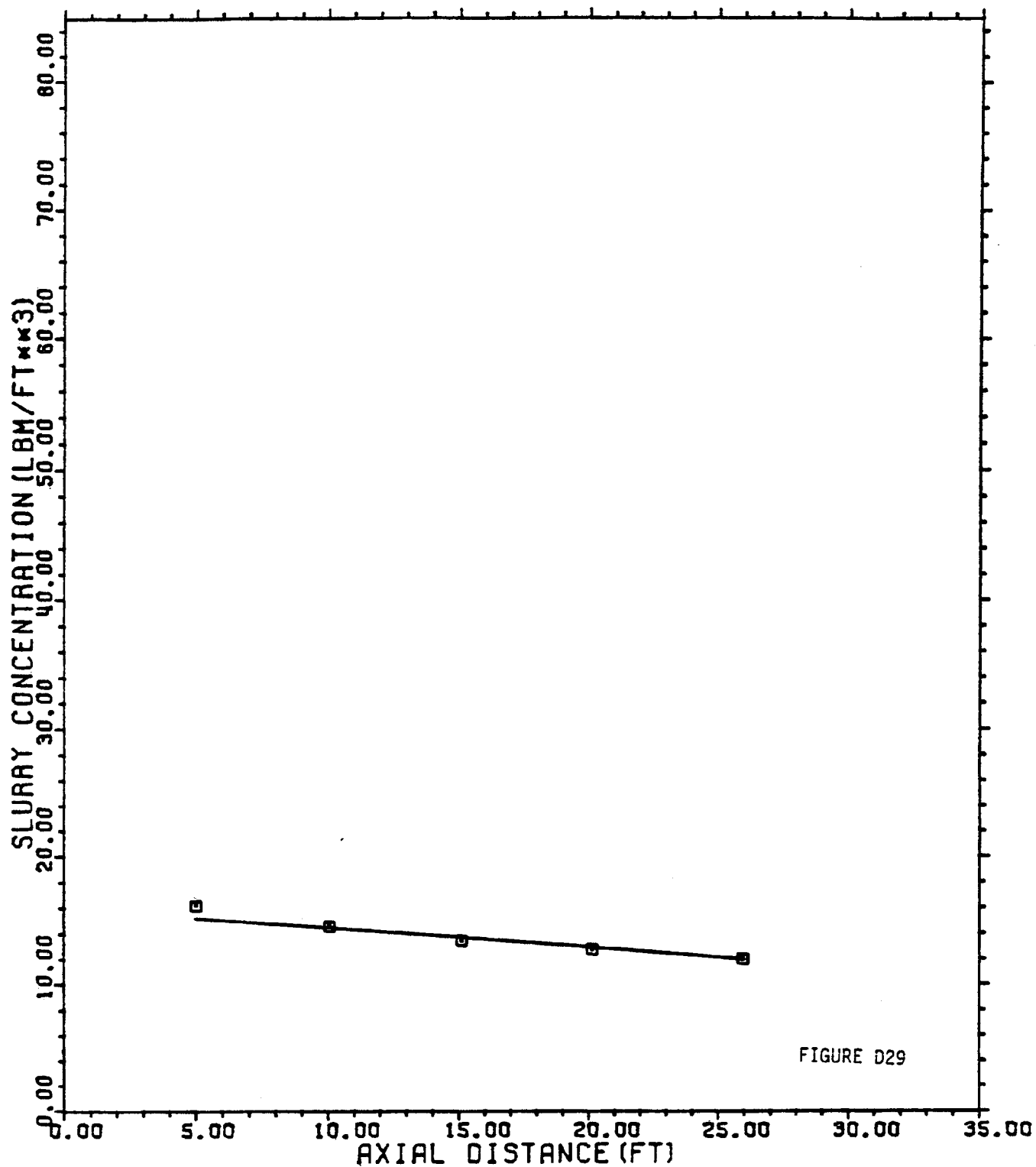
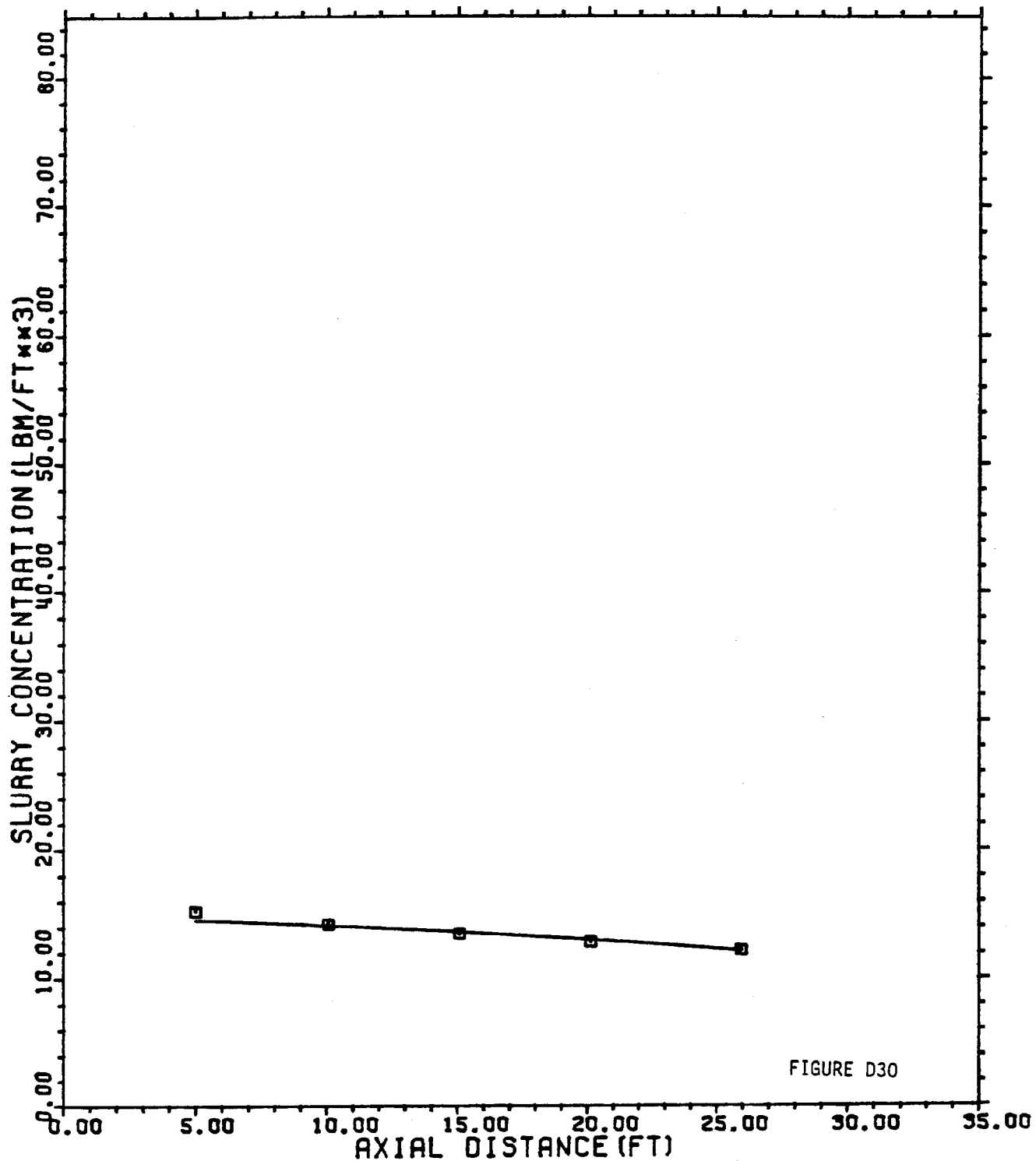
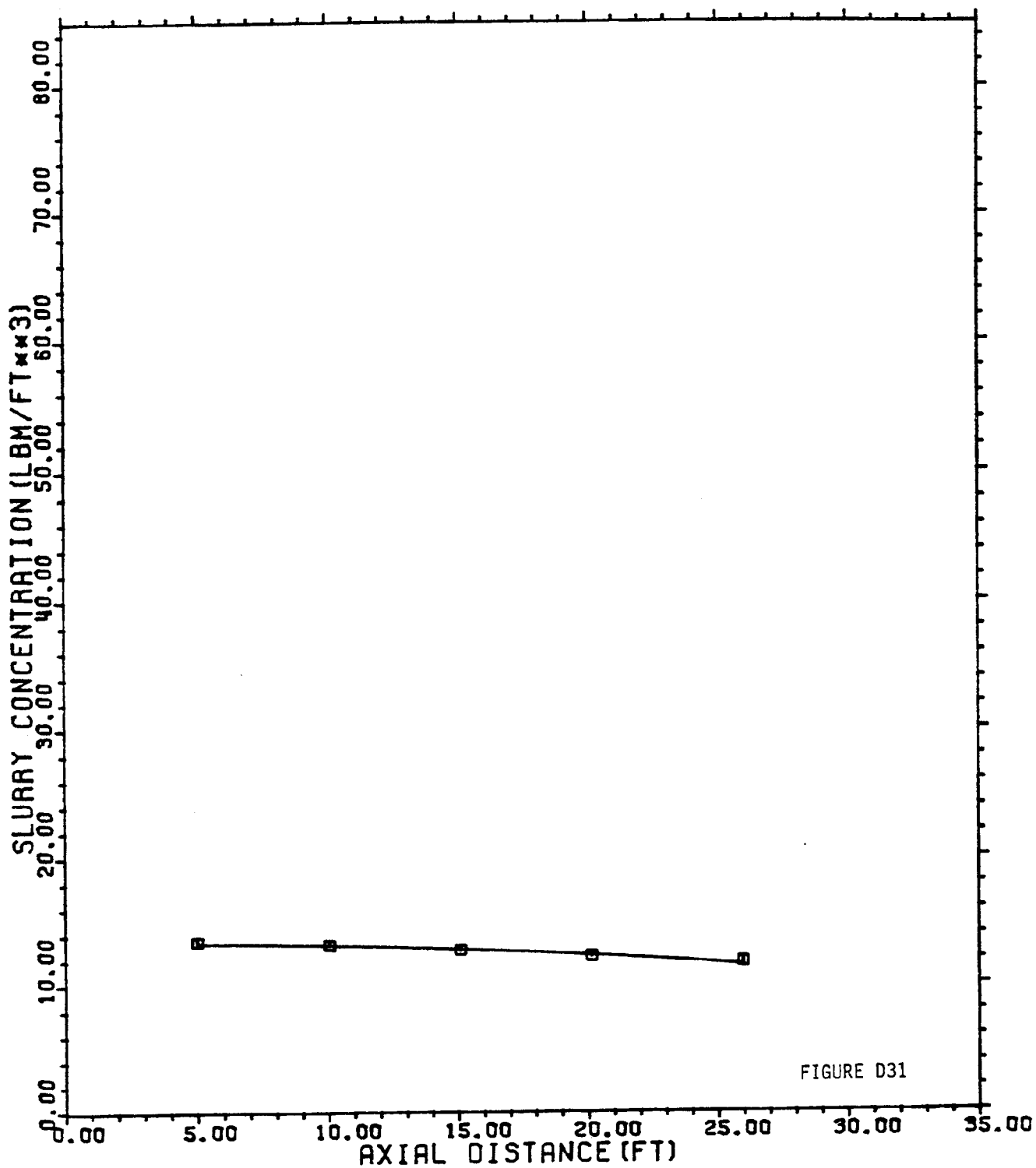


FIGURE D29

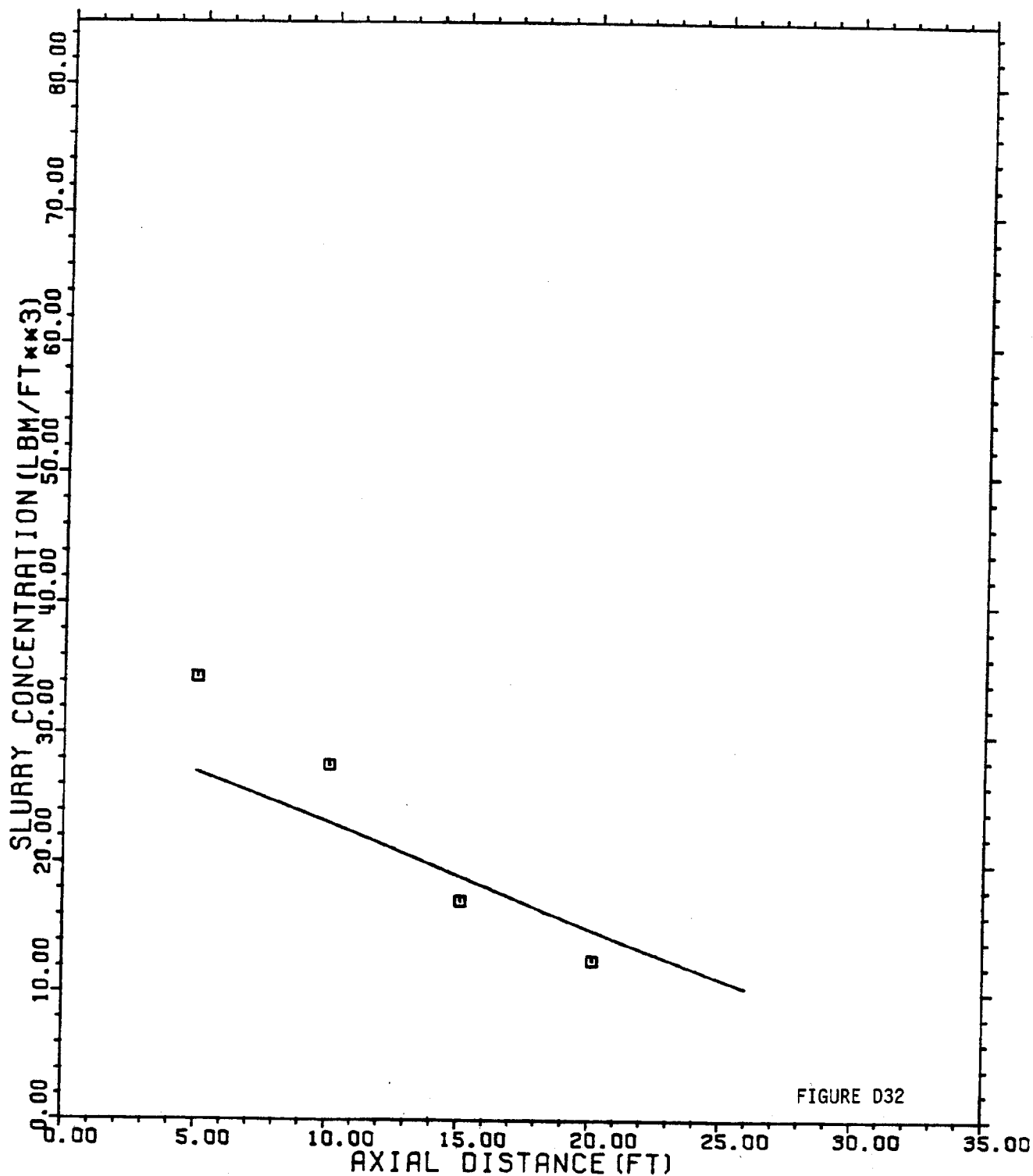
| CONC. VS. L                                                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT/SEC²): .803<br>PIPE DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                       |  |



| CONC. VS. L                                                                                                                                                                                                   |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .09<br>EL (FT/SEC): .803<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                   |                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 140<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC): .903<br>COLUMN DIAMETER: 12 INCHES |                                        |
|                                                                                                                                                                                                               | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .043<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT <sup>2</sup> /SEC): .438<br>----- 1.5 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                             |  |

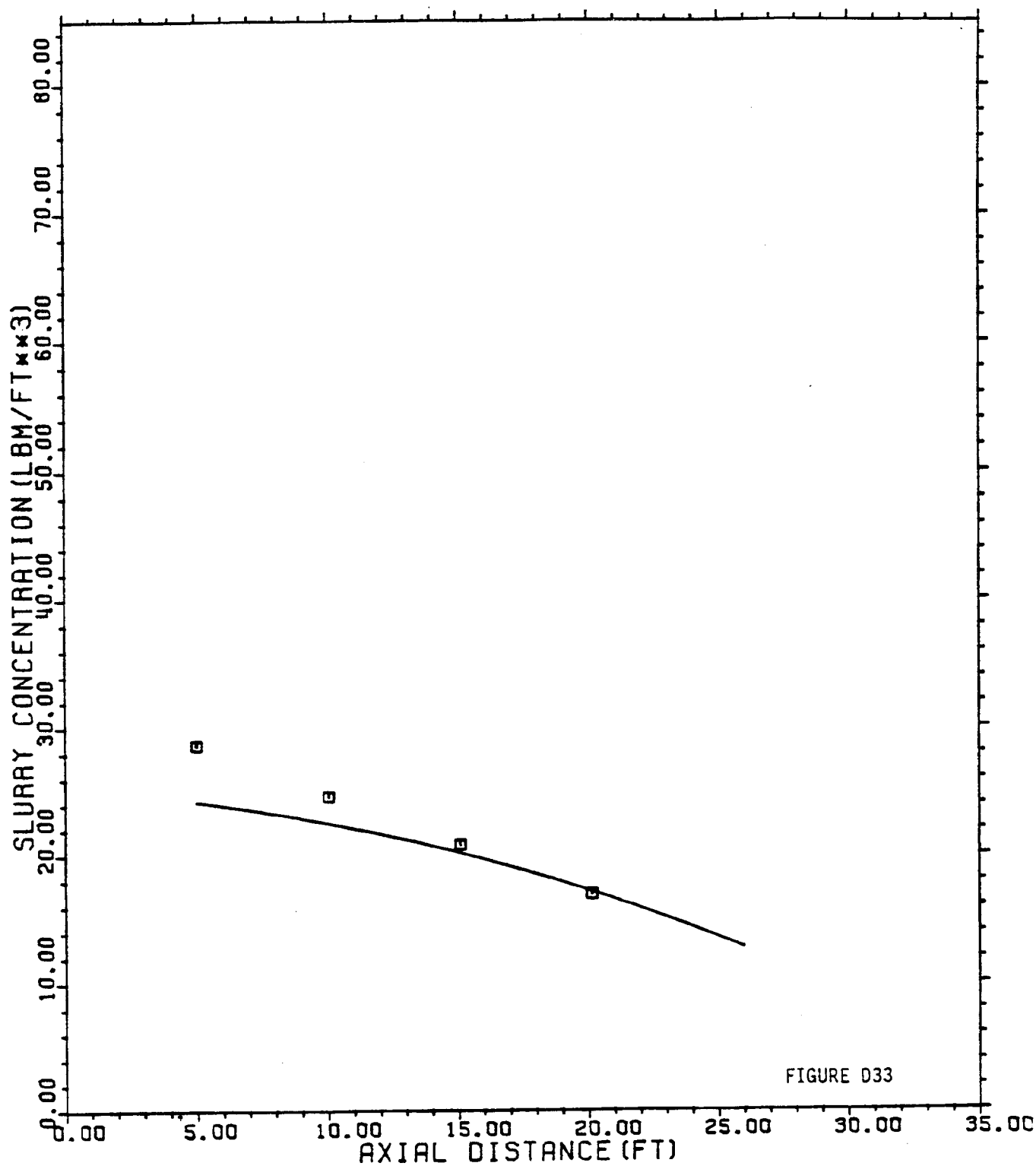
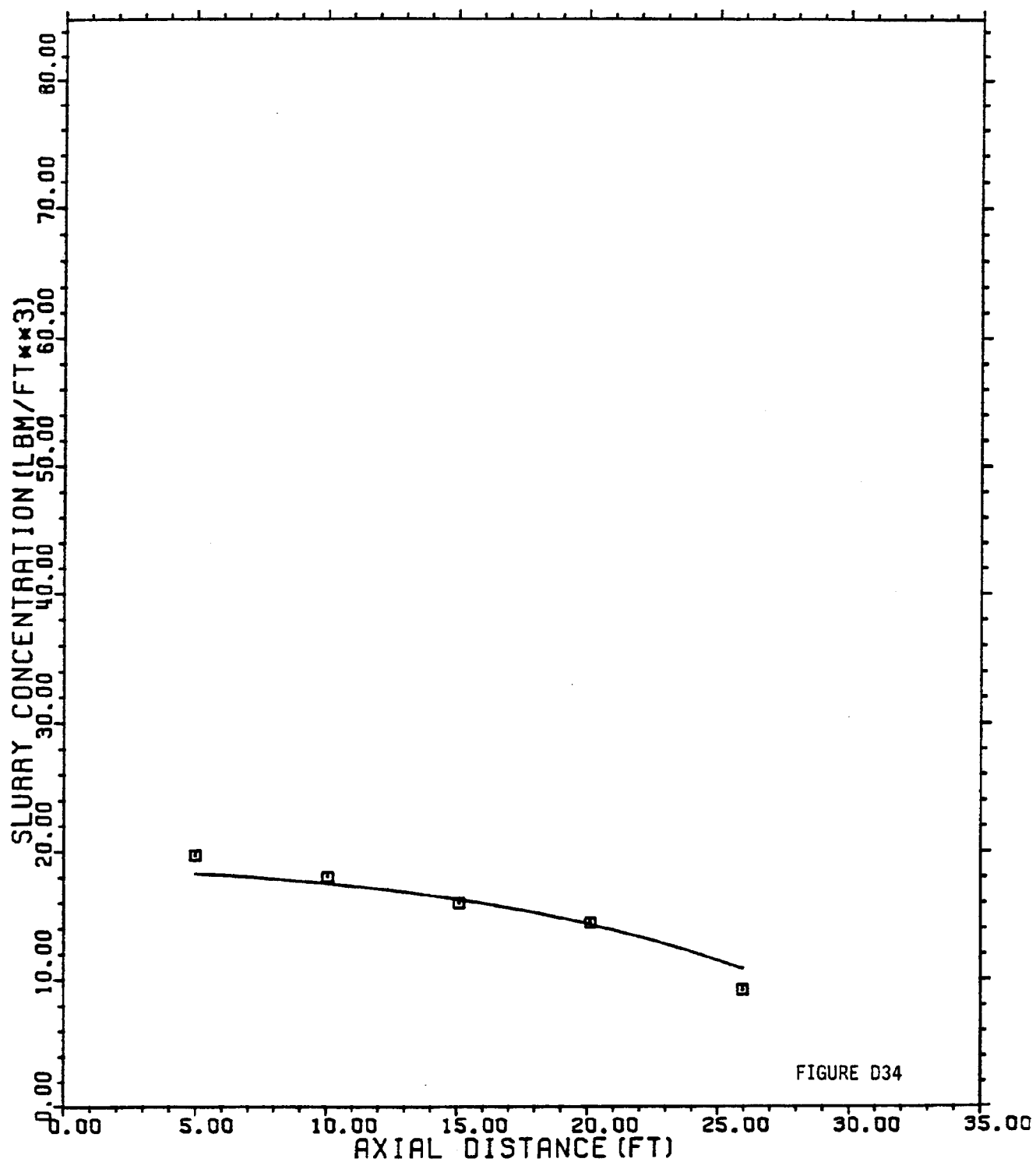


FIGURE D33

| CONC. VS. L                                                                                                                                                                       |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .05<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT=2/SEC): .438 | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |



| CONC. VS. L                                                                                                                                                                                                                 |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6080<br>GAS VELOCITY (FT/SEC): .05<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT/SEC <sup>2</sup> ): .438<br>COLUMN DIAMETER: 12 INCHES |  |
| □ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                                      |  |

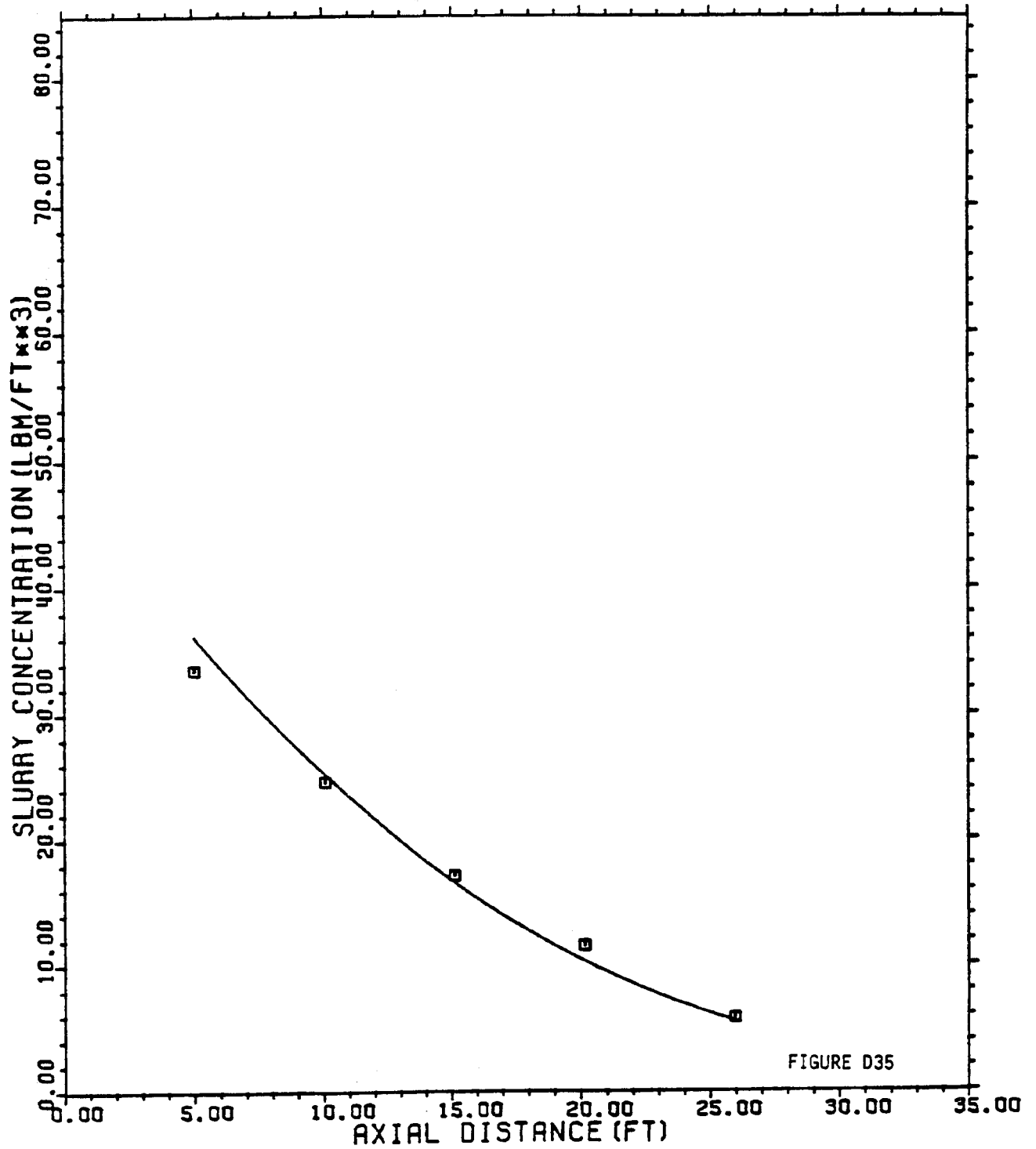
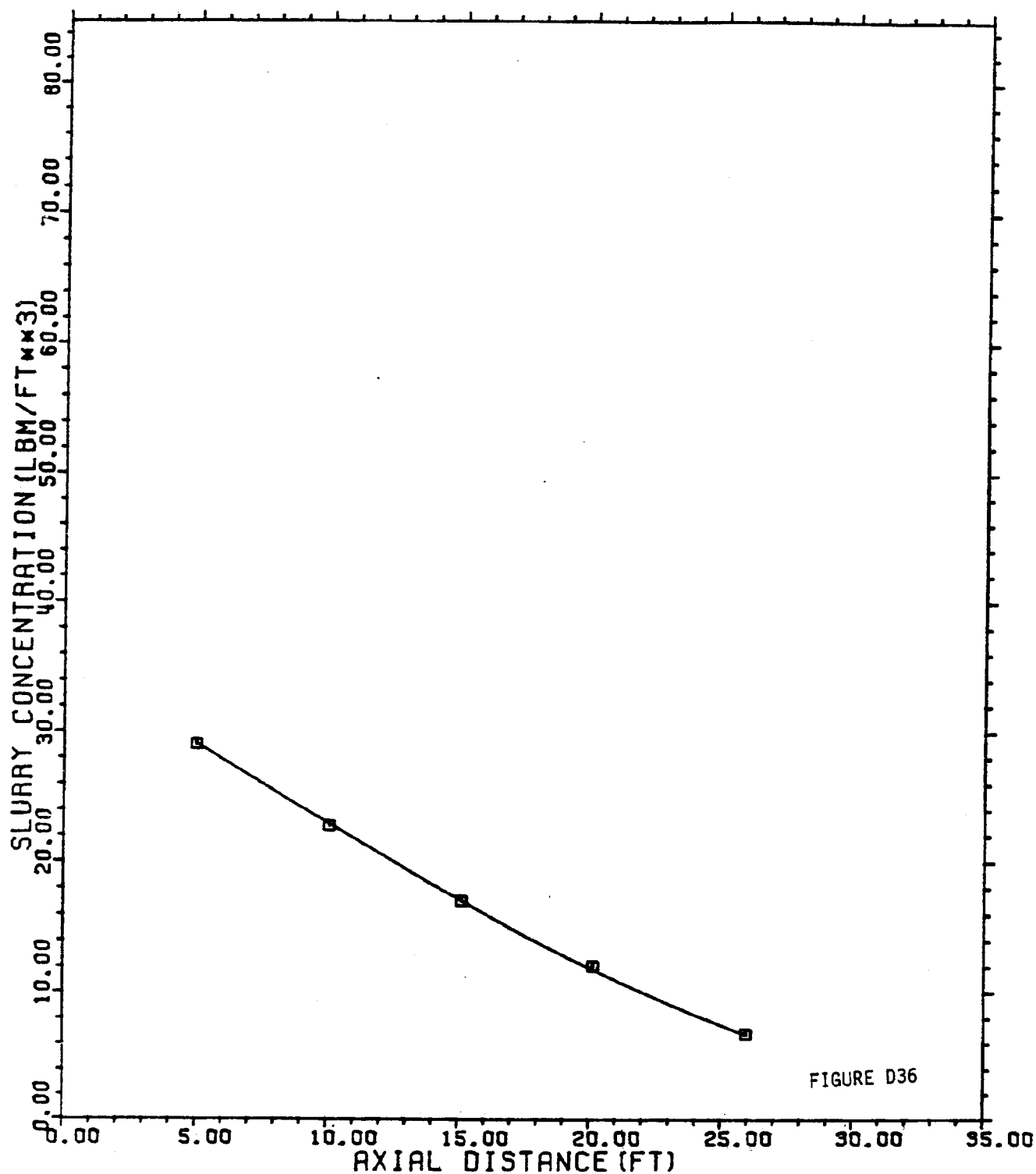


FIGURE D35

| CONC. VS. L                                                                                                                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND; MESH SIZE: 8080<br>GAS VELOCITY (FT/SEC): .2<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT=2/SEC): .589<br>COLUMN DIAMETER: 12 INCHES |  |
| ■ EXPERIMENTAL POINTS<br>— MODEL CURVE                                                                                                                                                                         |  |



| CONC. VS. L                                                                                                                                                                                                                   |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .2<br>LIQUID VELOCITY (FT/SEC): .03<br>EL (FT/IN <sup>2</sup> /SEC): .500<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

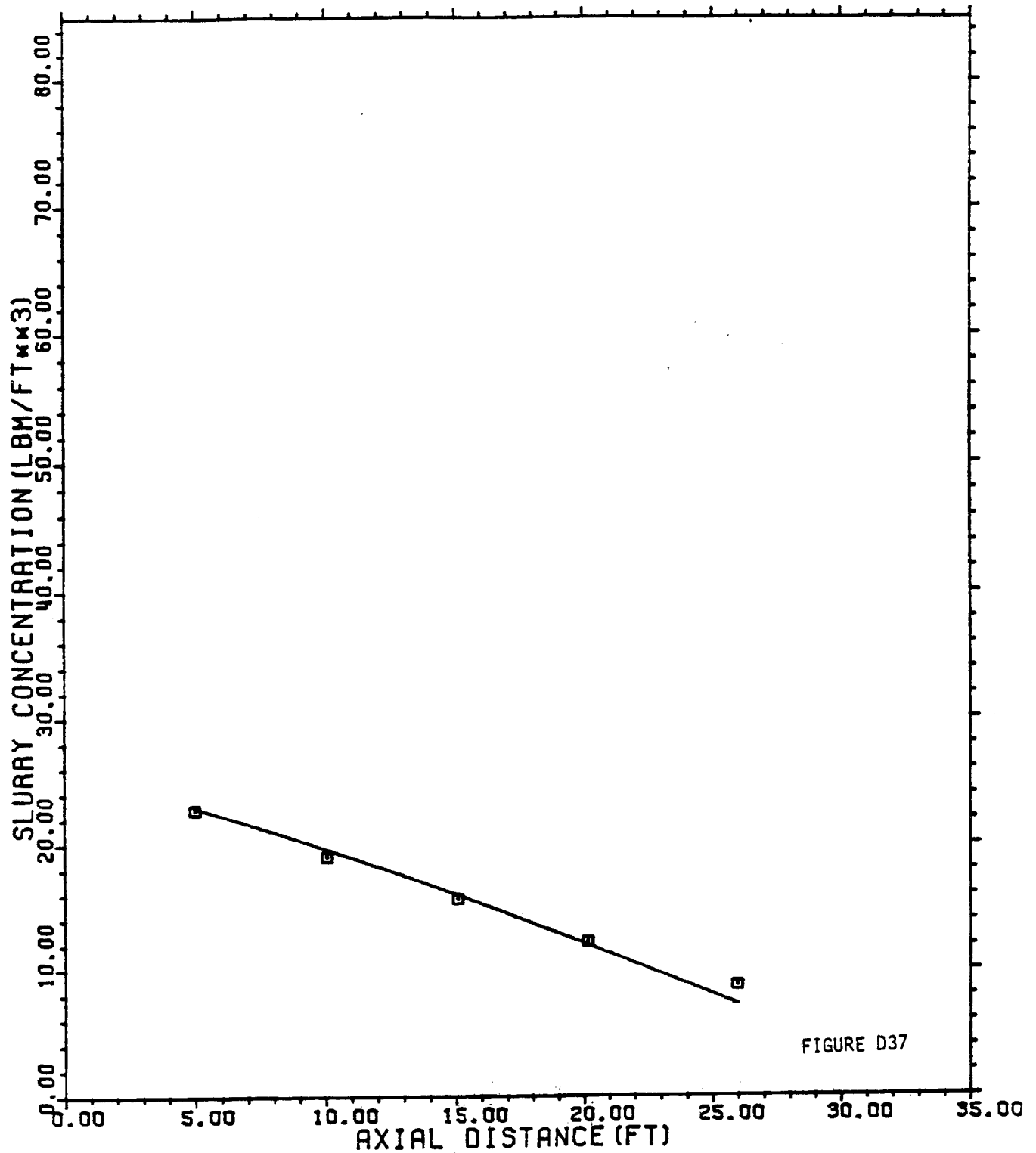


FIGURE D37

| CONC. VS. L                                                                                                                                                                                                       |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .197<br>LIQUID VELOCITY (FT/SEC): .05<br>EL (FT-M2/SEC): .589<br>COLUMN DIAMETER: 12 INCHES |                                        |
|                                                                                                                                                                                                                   | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

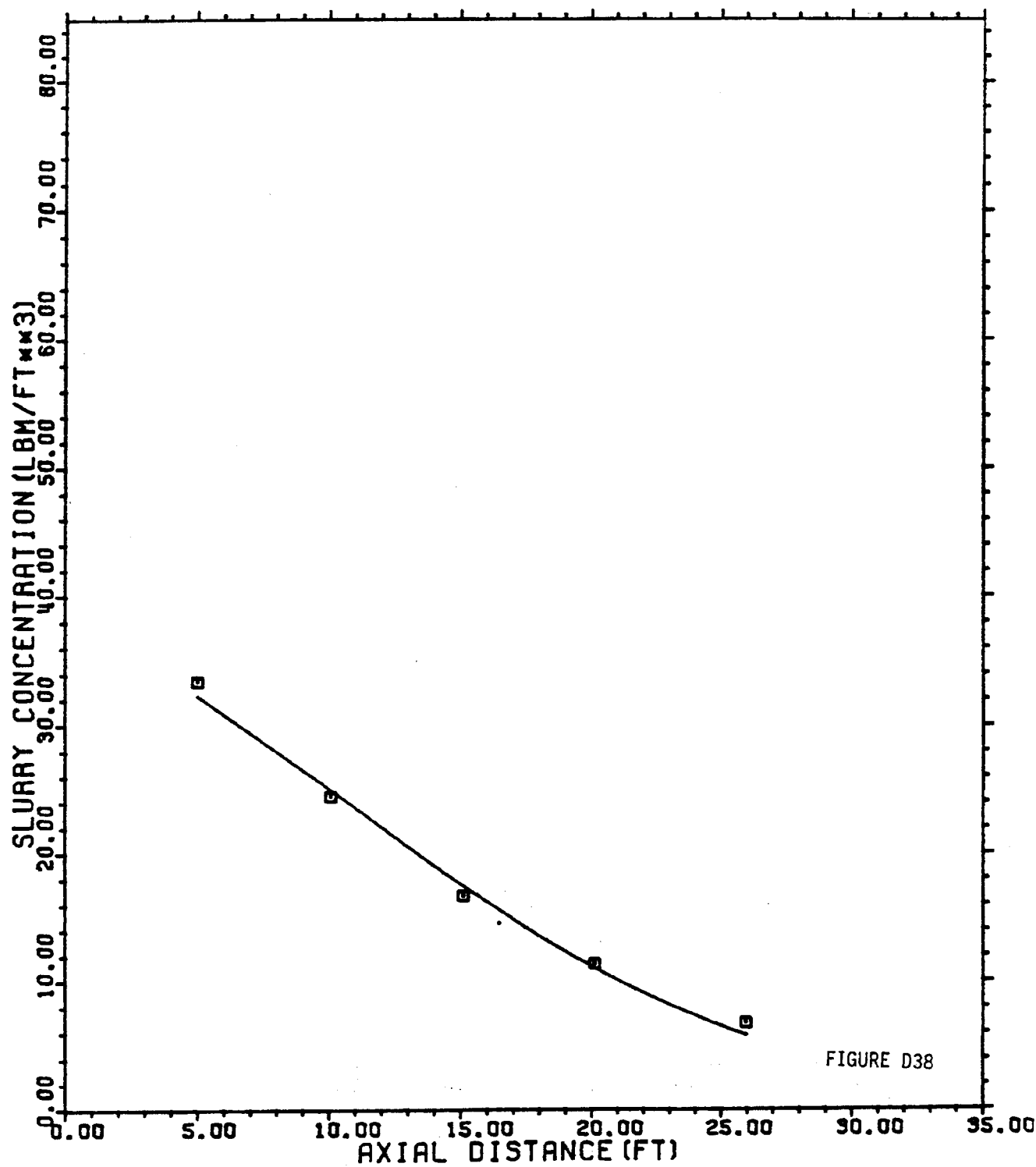


FIGURE D38

| CONC. VS. L                                                                                                                                                                                                                  |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 60% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .01<br>EL (FT/SEC <sup>2</sup> ): .903<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

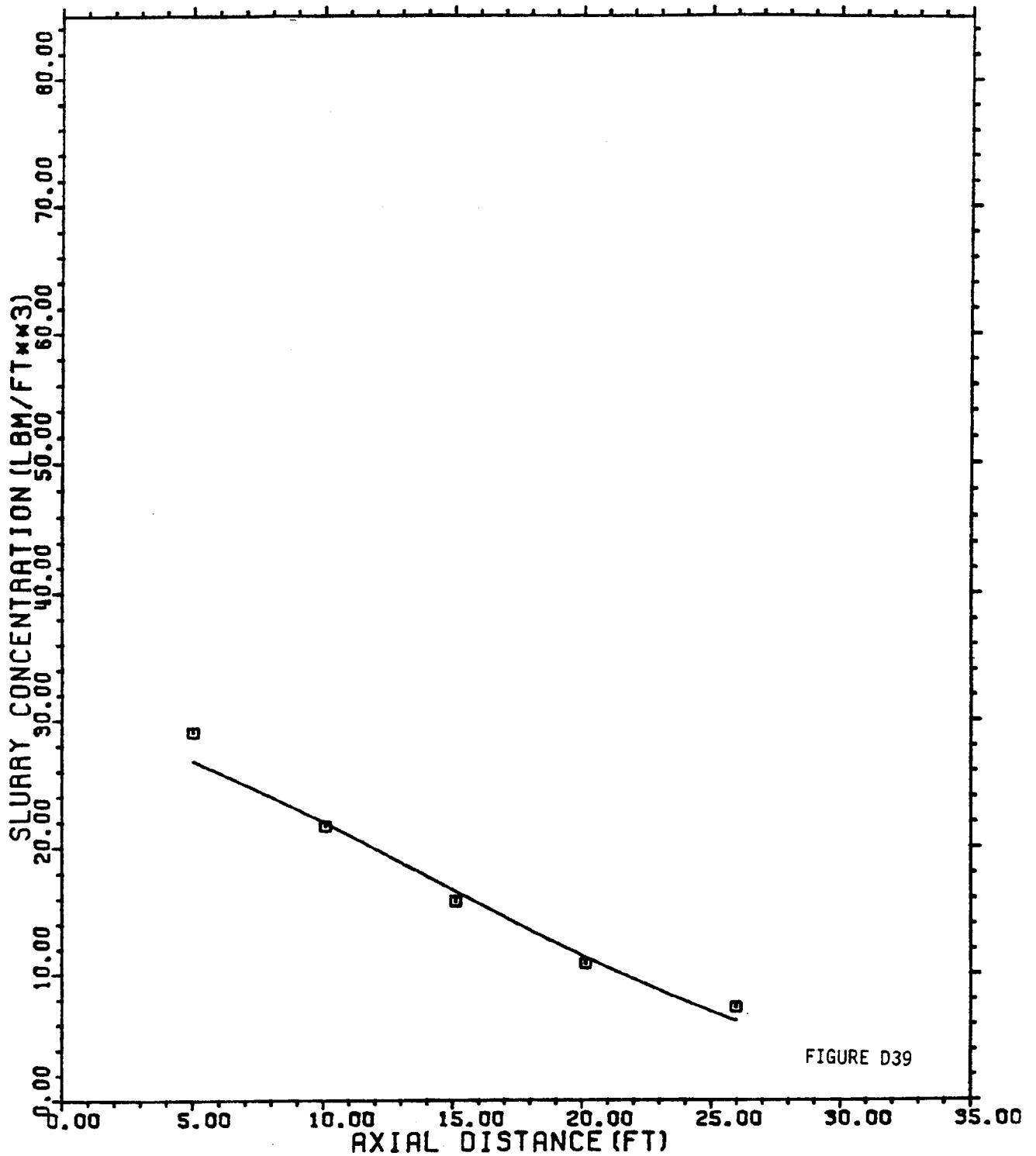


FIGURE D39

| CONC. VS. L                                                                                                                                                                                                                  |                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .03<br>SL (FT <sup>2</sup> /SEC): .903<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |

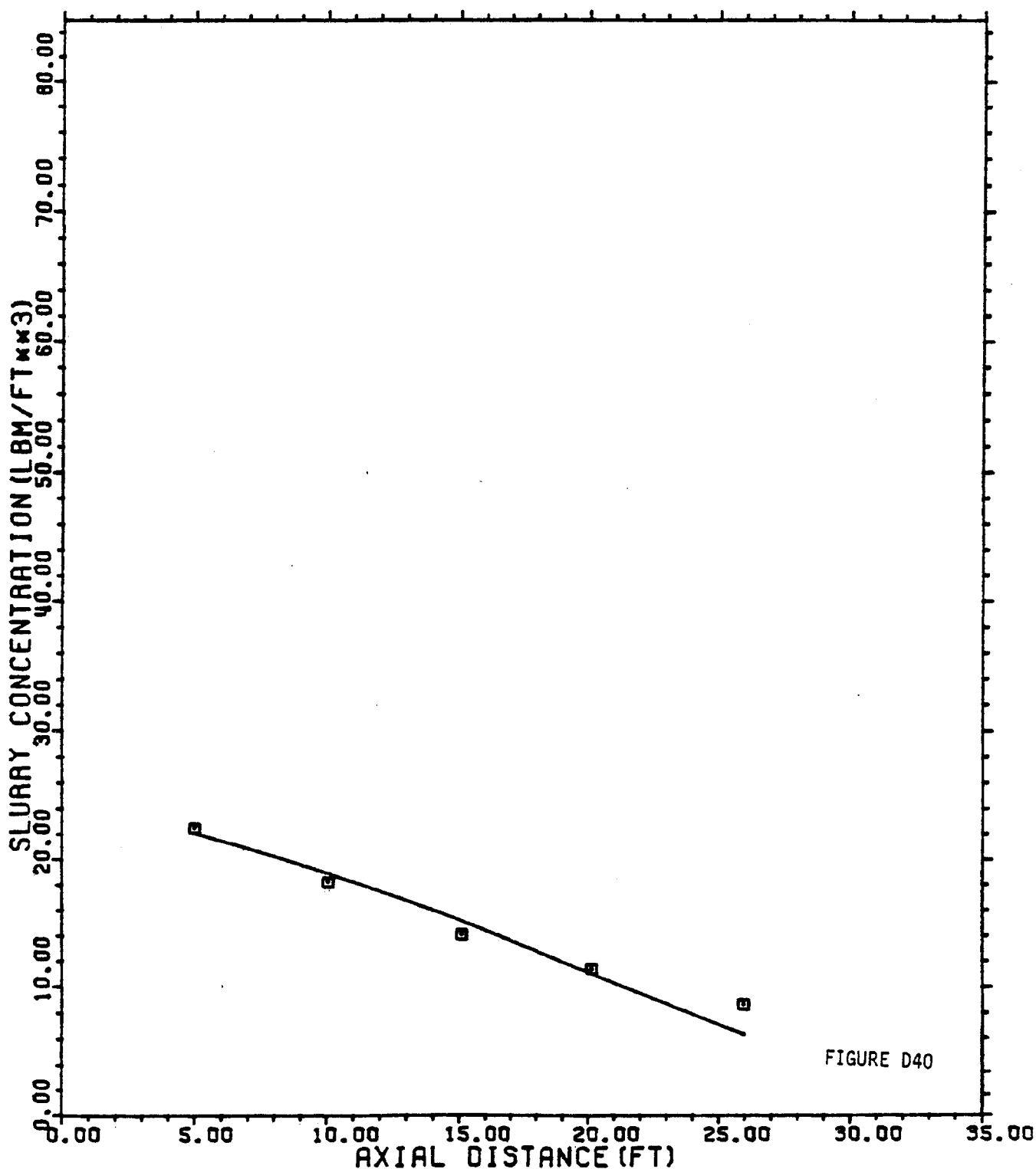


FIGURE D40

| CONC. VS. L                                                                                                                                                                                                     |                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SLURRY CONCENTRATION VS. AXIAL LENGTH<br>LIQUID: 50% GLYCOL<br>SOLID: SAND, MESH SIZE: 6000<br>GAS VELOCITY (FT/SEC): .400<br>LIQUID VELOCITY (FT/SEC): .05<br>EI (FT²/SEC): .803<br>COLUMN DIAMETER: 12 INCHES | □ EXPERIMENTAL POINTS<br>— MODEL CURVE |