65. The points and the least-squares fit is shown in the graph below. The graph has frequency in Hertz along the vertical axis and $1/L$ in inverse meters along the horizontal axis. The function found by the least squares fit procedure is $f = 276(1/L) + 0.037$. Assuming this fits either the model of an open organ pipe (mathematically similar to a string fixed at both ends) or that of a pipe closed at one end, as discussed in the textbook, then $f = v/2L$ in the former case or $f = v/4L$ in the latter. Thus, if the least-squares slope of 276 fits the first model, then a value of $v = 2(276) = 553$ m/s is implied. In the second model (the pipe with only one end open) we find $v = 4(276) = 1106$ m/s which is more "in the ballpark" of the 1400 m/s value cited in the problem. This suggests that the acoustic resonance involved in this situation is more closely related to the $n = 1$ case of Figure 18-15(b) than to Figure 18-14.