deflector (when floats were placed there) despite the previously mentioned overall balance of forces. This slow exchange was observed on flood tides as well. As the sole purpose of the gap was to provide for mixing behind the deflector, and because this mixing took place at a more desirable rate in the absence of the gap, the gap was deemed unnecessary.

Figure 6.11 shows the flow patterns resulting from the placement of a T-groin at a location approximately 100 meters west of the deflector near the point where the channel winds into the northern reach of the Intracoastal Waterway (problem site C). The purpose of this groin would be to retain sand along the shoreline. One such groin was tested in the model although several could conceivably be employed in the prototype. Testing of the groin was done in order to determine the flow patterns and any adverse current velocities it may create as well as the effects it would have on the flow patterns near the deflector during ebb tide.

The shorter streaks made by the floats near the T-groin as shown in Fig. 6.11 indicate that the groin results in slower current velocities in its immediate vicinity. These currents are on the order of 0.2 m/sec for flood and ebb flows thereby resulting in P values ranging from -0.2 to -0.7 which indicate that deposition could take place here. Small circulation patterns were observed at the updrift side of the T-groin but these were not believed to be of sufficient magnitude to overcome the tendency for deposition indicated by the P values obtained. Figures 6.9 and 6.10 were obtained with this T-groin in place. No noticeable adverse effects on the flow patterns (i.e. increased eddy action) near the deflector were observed due to the T-groin and no significant changes in these flow patterns were observed upon its removal.