CHAPTER 7
CONCLUSIONS

In this thesis, an extension to non-resonant interaction theories was developed to accommodate oblique incidence and seabeds of other than sinusoidal shape, specifically, a series of cosine bumps on a flat bottom. The new theory was compared to existing theories for normal and oblique incidence. Agreement between all theories for arbitrary bottoms was fair.

Additionally, the numerical solution of a complete governing equation for undulations on a mild slope was compared to laboratory data. The comparison shows a slight shift in frequency at resonant peaks. This may due to inadequate description of the bottom boundary condition used in the solution. Included in the laboratory study was an application of using spectral analysis to determine the incident and reflected wave energies for a monochromatic wave field.

Finally, an investigation of wave fields between a barfield and beach was performed. The numerical predictions, although neglecting wave damping and nonlinearities, show the potential for large amplitude trapped modes between the barfield and shoreline. It is apparent additional work in this application is necessary before implementing prototypes in the environment.