CHAPTER VI

CONCLUSON AND RECOMMENDATION

6.1 Conclusion

a) The proposed general model was successful in reducing the computing time, but it failed to save the memory spaces. The computing time was reduced by 32% of the ordinary method.

b) This proposed model was tested at low and moderate pressure ranging 150.0 psia to 1115.0 psia and a temperature range of $-8.0^{\circ}F$ to $50.0^{\circ}F$. The percentage average deviation (compared with the ordinary model) was in range of 0.6 to 3.1 for x_i's of the liquid phase and in the range of 0.0 to 0.1 for y's of the vapor phase.

c) The proposed general model gave better values of x_i's and y_i's than these given by the ordinary model.

d) The heavy-pseudocomponent should include i-butane and all the heavier paraffin, while the light-pseudocomponent should include methane, ethane and propane.

6.2 Recommendation

Vapor-liquid equilibrium computing time can be further reduced, if the compositions, x_i's and y_i's of the heavy-hydrocarbons that form the heavy-pseudocomponent can be estimated directly from z_i's without being subject to a flash calculation. Thus, it is recommended that a study should be carried out to extend the section 5.4 of this report.