

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATION

#### 5.1 Conclusions

From the GC chromatogram, composition of LK2 crude was similar to LK1 crude. The study of characteristics and properties of crude showed that LK2 crude had lower sp.gr. pour point, WAT and WDT which these properties indicated that LK2 was lighter than LK1., which is consistent with TBP curves of two crudes. Several of hydrocarbon solvents were tested which had slight effect on pour point of crude. Various polymeric chemicals were also employed. The effective polymers for new crude (LK2) were EVA derivatives and the most effective polymer was the EVA (40% vinyl acetate content) at 1,000 ppm concentration that decreased the pour point from 33°C to 17°C. By adding the EVA into crude samples WAT and WDT of treated crude was not significantly changed. Moreover combined inhibitor was examined. The results showed that combined inhibitors have no synergistic effect. Additionally, inhibiting stability was tested, and the treated crude had flow ability for at least 1 week after effective inhibitor was added. During the week, the soft wax agglomeration of crude was observed but easily dispersed by applying a slight force. In terms of economical assessment, the polymer inhibitors had higher potential to use in real field than solvent inhibitor.

#### 5.2 Recommendation

The pilot scale test should be investigated to predict the correlation between pour point and ROB percent and assess the economy of using each inhibitor in real field. Moreover, other polymers produced locally should be a priority to be employed as wax inhibitors to make this project more attractive to the decision-making level.