

## CHAPTER V

### CONCLUSIONS

1. The Ca/DTPMPA precipitate molar ratio increased with increasing the solution pH as pH were varied from pH 3 to 12.
2. The precipitate having the Ca/DTPMPA molar ratio of 2:1 had the highest equilibrium solubility compared with other ratios.
3. The settling temperature affected the precipitate molar ratio. An increase in temperature resulted in increasing significantly the precipitate molar ratio especially the temperature range of 20°-30 °C.
4. The Ca/DTPMPA molar ratio 2:1 had the highest concentration of DTPMPA during the release process, while the ratio of 4.5:1 had the lowest DTPMPA concentration. In addition, the 4.5:1 Ca/DTPMPA precipitate gave the longest squeeze lifetime.
5. The dissolution rate of Ca/DTPMPA precipitate increased with increasing the dissolving liquid pH.
6. In comparison among three types of scale inhibitors for Calcium-type scale, the order of the squeeze lifetime was HEDP > DTPMPA > ATMP.