

## 5.1 Conclusion

The following points give the conclusion of this study:

- Increasing surfactant concentration will increase the cumulative oil production, but will increase water production also and thus will increase treatment cost.
- Using surfactant as chemical treatment decreases the residual oil saturation.
- Difference (%) between average cumulative oil (calculated from all runs) and optimum cumulative oil shows an increment in cumulative oil produced by 2.9% for injection rate parameter. Other results are tabulated in table 4.11.
- The optimum design parameters for surfactant Huff and puff injection are as follow:

Injection Rate = 120 m<sup>3</sup>/day

Soaking period = 5 day

Injection duration = 10 day

Surfactant concentration = 0.1%

Total volume of fluid injected = 1200 m<sup>3</sup>

## **5.2 Recommendations**

- Study has been made for one well, but can be expanded to the entire field.
- Polymer and alkaline can be add to surfactant to make ASP Huff and Puff, but it complex operation and require additional data.
- Surfactant Huff and Puff can only be performed for low temperature wells, otherwise surfactant will degrade.
- CMG soft ware appears to be good tool for performing such study.
- Some data were missing so our design only include technical evaluation not economical evaluation.