Suffield Polymer Core Flood Study - A Key Component of the Pilot Project

Jenny Liu¹ and Warren Smart¹

¹Harvest Operations Corp., Calgary, Canada

Abstract

The Suffield polymer core flood study is a key part of the polymer flood pilot with objectives to screen a suitable polymer and concentration for field application and evaluate the potential of polymer flood under reservoir conditions. The Suffield polymer pilot was based on the results of polymer core flood study and provided important data (recovery factor, time to see production response and oil rate etc.) to evaluate the pilot. The study includes core plug selection, core characterization, screening suitable chemical formulations (polymer, surfactant (S), alkaline/surfactant/polymer (ASP)) and core flooding experiments with polymer (S or ASP).

The polymer pilot has been in place for over two years with successful results showing oil cut increasing to 20% from 4% and oil production at 600 bbl/d up from 400 bbl/d. It has demonstrated that the core flood study is a reliable guide for field application.