

Grosmont Geology, Steam Stimulation, and Fluid Response – Types Curves for Carbonates

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Abstract

Exploitation of hydrocarbon-based energy is increasingly targeting geologically challenging reservoirs with attendant increase in recovery uncertainties. Among these is heavy oil recovery from complex carbonates, as a result, poor geologic and productive data is very limited. How to improve understanding of the dynamic interaction between geobodies and engineering processes are critical, to reduce uncertainties associated with hydrocarbon recovery from such reservoirs. While the Grosmont Formation in Alberta Canada contains the largest bitumen deposit in carbonates, it also has arguably the most complex geology. Although early (1980s vintage) and the currently ongoing pilots provide invaluable data aimed at reducing development uncertainties, the cost implications provide a window of opportunity for robust geomodeling and simulation as a complementary tool for extensive investigations. In this paper will investigate the influence of geo-complexities of carbonate reservoir on thermal recovery processes based on the simulation software, and tracking contribution of object types to oil recovery. To evaluate depletion pattern in different geobodies will be concerned in this paper.