

Investigation of Phase and Emulsion Behavior, Surfactant Retention, and Condensate Recovery for Condensate/Water/Ethanol Mixtures

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ABSTRACT

This abstract describes work performed at Morehouse College under DOE Grant No. DE-FG26-02NT15447 during the period October 01, 2002 to April 01, 2003 which covers the first six months of the project. Presently work is in progress to characterize phase and emulsion behavior for condensate/water/ethanol system. Temperature and salinity scans are planned to identify the optimal salinity and temperature, and the temperature and salinity intervals in which all three phases coexist for this system. Test matrix to perform salinity and temperature scans has been established. Supply requests to obtain hydrocarbons, surfactant, etc., were processed and supplies obtained. Current literature in the subject area, and modeling efforts that were established in our previous studies to predict electrical conductivities and inversion phenomena were reviewed. Based on the review a computer model to predict electrical conductivities of the ethylbenzene (that has the equivalent carbon number of the condensate) / water/ ethanol system is being developed.