CEST02_088

# EOS Modeling For Different Fluid Types Using PVTi

Hayat K. Alhaj, Laila D. Saleh
Department of Petroleum Engineering, University of Tripoli, Tripoli, Libya,
hayatkhalifa@yahoo.com

## ABSTRACT

The PVT properties are keys for reservoir management. They are used by reservoir engineers for estimating oil or gas reserves in place, fluid flow through the porous media, production schemes, and enhanced oil recovery planning. All these physical properties are normally measured and calculated accurately in a PVT laboratory. During the prospecting phase, these properties are generally not available and are estimated from empirical correlations or EOS modeling. In this study, build EOS for Black oil fluid by using PVTi software that supported by Schulmberger. Before build EOS modeling for fluid samples, the validation check were run to check the quality of PVT laboratory measurement using Y-function to validate constant composition expansion test, material balance to validate the differential liberation test and density test to check the separator test, with adjustment the differential liberation data to separator condition for three fluid samples from different Libyan oil field. All PVT validation checks show good laboratory measurement for the samples that used in this study and the samples from Intisar oil field two wells. Splitting and grouping techniques were used in the study to tuning the EOS to laboratory measurement, the splitting values has clear effect in matching as shows in Intisar oil field model.

**Keywords:** PVT, Laboratory, Volatile, Black oil, splitting.