

CEST02_051

ANALYSIS OF NATURAL GAS PROPERTIES (A CASE STUDY OF Wafa GAS FIELD)

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ABSTRACT

The field is located about 540 KM southwest of Tripoli .The southern part was discovered in 1964 by Shell – Libya with well D1, and the northern culmination, was discovered Sirte oil Company in 1991 with well A1. In designing gas production, processing, transport and handling systems, a complete knowledge of natural gas properties is crucial. For this reason, the purpose of this study was measurement and prediction of hydrocarbon fluid properties .This study was conducted to shows the reservoir of natural gas properties analysis of Wafa gas field from gas composition. Based on the studied composition, it is shown that the Wafa gas is a sweet gas, the viscosity of the gas is 0.01095 cp at reservoir formation temperature 80.28 °F and pressure 514.88 psia , The gas compressibility factor, real gas density and gas formation volume factor are 0.92, 1.80 lbm/ [ft] ^{^3} , 0.02699 [ft] ^{^3}/scf, respectively.

Keywords: Composition, Specific Gravity, properties, Compressibility and Viscosity.