

GEOLOGICAL LABORATORY

Orogenic-Panterra Laboratory Services Sdn Bhd is a geoscience Joint venture providing practical solutions for the International Oil & Gas industry. Since its establishment in 2008, the geological lab has been committed to quality, reliability and client focus, offering fully customized services in close communication with the client. Our services include;

Routine and Special Core Analysis

Measurements normally carried out on core plugs, whole core, drill-cuttings or outcrop samples, to determine petrophysical properties, generally including porosity and permeability, grain density, fluid saturation and a description of lithology. Routine Core Analysis (RCA) often includes spectral core gamma log and core photography (white light and UV light). Special Core Analysis (SCAL) provides specific information to characterize a particular rock property. On selected samples, a SCAL program can be performed to obtain parameters for log calibration (e.g. electrical properties m & n), and to make a prediction of flow potential and saturation distributions (capillary pressure, wettability). All the above parameters are required for hydrocarbon reserve estimates.

PVT

Pressure - Volume - Temperature (PVT) laboratory analysis will provide customized solutions for all reservoir fluid properties. Physical property and phase behavior PVT data provide the information to manage reservoir production effectively. Initial measurements of fluid compressibility and shrinkage factors are required to determine oil/gas in place, provide input for recovery factor estimates and evaluate reservoir material balance calculations. Understanding fluid behavior in the reservoir requires viscosity, constant composition expansion, and differential liberation or constant volume depletions. Fluid behavior influences both recovery and costs.

Sedimentology

Sedimentology studies involve (among others) detailed core description, interpretation of lithofacies and the development of a depositional model. Other tools such as petrography, SEM and XRD analysis can further refine the interpretation of the reservoir quality and diagenetic history of the reservoir. In co-operation with other disciplines a sequence stratigraphic analysis can be performed as well.

Biostratigraphy

Biostratigraphy is the branch of stratigraphy which focuses on correlating and assigning relative ages of rock strata by using the fossil assemblages contained within them. Our Biostratigraphy analysis comprise Palynological, Micropaleontology and Calcareous Nannoplankton.

Geochemistry

Services include Source Rock Evaluation, Gas Condensate, Crude Oil & Oil Seep Characterization and Reservoir Geochemistry Analyses. Source Rock Evaluation includes the analyses of the Total Organic Carbon Content (TOC), Rock Eval pyrolysis, kerogen, Vitrinite Reflectance (VR) and Thermal Alteration Index (TAI).

