Impact of Oil Sands Core Disturbance on Lab Testing Results

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Oil sands core is commonly disturbed to some degrees during drilling operation and/or as a result of the release of its overburden pressures and absorbed gases. The release of overburden pressures and gases may result in core expansion and infiltration of water from drilling mud. Drilling disturbance affects core integrity, depending on disturbance severity. These different forms of disturbance have different impacts on sample selection, sample analysis results and how to interpret and use core analysis results. Core analysis reports, if representing the samples tested, should be interpreted and used in combination of the understanding of core disturbance. Systematic documentation of core disturbance during core logging process provides valuable information that can help lab report users to interpret and use data correctly and evaluate their reservoirs objectively.