

Core Permeability

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Summary

Various types of Core Permeability will be discussed.

Introduction

All core permeability data in the western Canadian data base is optimistic for a number of reasons. Conventional permeability data is measured on fully cleaned samples at ambient conditions. The inclusion of water and effects of Net Overburden stress can greatly affect permeability measurements.

Theory and/or Method

Steady State and Unsteady State permeabilities will be covered as well as Permeability sensitivity to overburden stress and Effective Permeability when more than one phase is present in the core. Many types of permeameters that are designed to analyze different types of lithologies and permeability ranges are discussed.

Examples

Real data examples from Western Canada will be presented.

Conclusions

Although historical permeabilities are very valuable, they need to be “corrected” for in-situ conditions.