

AGAT Laboratories 

Overburden Electrical Properties

AGAT Laboratories is a highly specialized, Canadian-based company that provides laboratory services worldwide. With over 40 years of experience, locations coast to coast and 1,200 employees Canada-wide, AGAT Laboratories is the most geographically and technically diversified commercial testing laboratory in Canada. Committed to local communities, AGAT Laboratories aims to maintain our mission statement to deliver “Service Beyond Analysis”.

Our laboratory operations offer full-service solutions for a wide range of industries, including Mining, Environmental, Energy, Industrial, Transportation, Agriculture and Food, Forensic Science, and the Life Sciences sectors.

AGAT Laboratories has a custom-built Overburden Electrical Properties instrument that allows core resistivity measurements under reservoir pressure and temperature. Resistivity of brine saturated core samples is continuously monitored throughout the desaturation cycle, from 100% brine saturation to Swir, to determine Archie’s parameters (a, m, and n). Desaturation is performed through the injection of a displacement fluid (typically gas or oil), with production volumes measured downstream of the sample. The instrument is equipped with in line differential pressure transducers, allowing permeability measurements throughout the experiment.

Archie’s parameters can only be determined empirically and are reservoir and area specific. The parameters are used to interpret resistivity well logs in order to determine accurate in situ saturations throughout the depth of the reservoir to aid in reserves calculations, well placement, and production planning.

Reach out to your business development representative or contact us:



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