

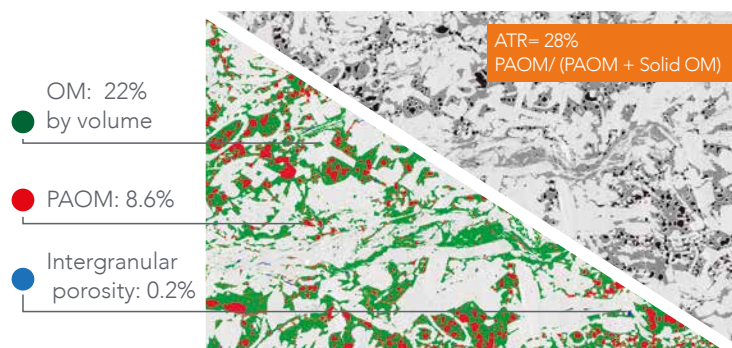
UNDERSTAND THE PORE SYSTEM AND QUANTIFY THE RELATIVE PRODUCIBILITY OF DIFFERENT ROCK TEXTURES WITH INGRAIN'S SEM IMAGING ANALYSIS.

Ingrain's proprietary offering provides unmatched image quality in conjunction with a quantitative understanding of representative **volume fractions** and **pore morphology**, providing key insight of storage potential and assessing the flow of hydrocarbons in your reservoir.

Obtain Volume Fractions while Maintaining Spatial Distribution

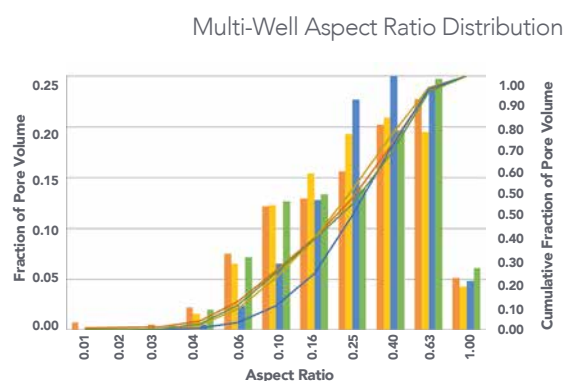
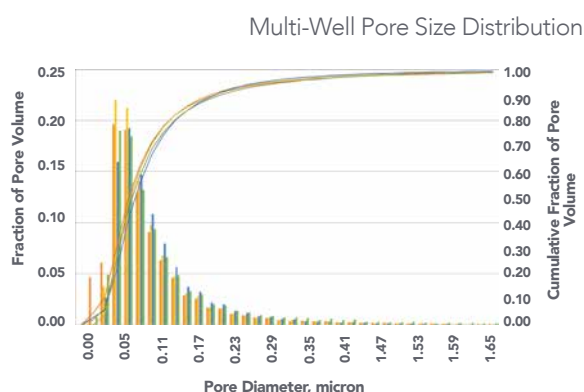
In unconventional shale reservoirs, porosity associated with organic matter (PAOM) is a key indication of hydrocarbon storage. Ingrain accurately computes PAOM as well as the fraction of original solid organic matter that has been preserved and converted to porosity, abbreviated "Apparent Transformation Ratio" (ATR).

- Directly compute effective porosity, as well as the different pore types present in your rock (PAOM, inter and intragranular).
- Obtain insights about thermal maturity and the ability of the rock matrix to preserve organic porosity.
- Predict PAOM in offset wells where only TOC is available, using statistical analysis and empirical trends.



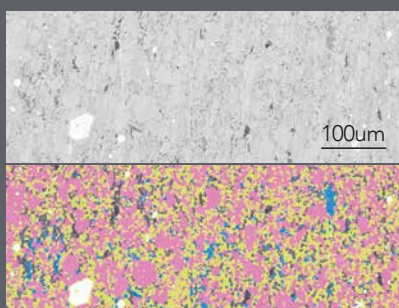
Quickly Relate Pore Morphology to Rock Properties

Cost effectively predict fluid flow transport properties with quantitative information about pore type, size and shape.



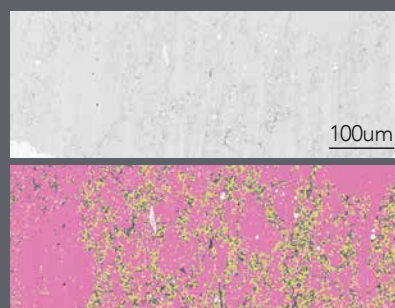
Ensure Representativeness of your Volumetrics with FabricsML™

Ingrain's newly developed methodology propagates digital rock properties from a small subsample to a larger sample via fabric recognition and mathematical models.



Porosity: 1.37%
 OM: 8.25%
 PAOM: 0.77%
 ATR: 9%

Siliceous mudrock with high TOC content shows grains surrounded by much finer mix of materials



Porosity: 2.4%
 OM: 2.9%
 PAOM: 0.8%
 ATR: 22%

Limestone sample shows coarser grains and lower mix material content