

A CASE STUDY

ART™: Advanced Rock Typing provides weighted petrophysical parameters based on image recognition from thin sections of PSWC.



Overview

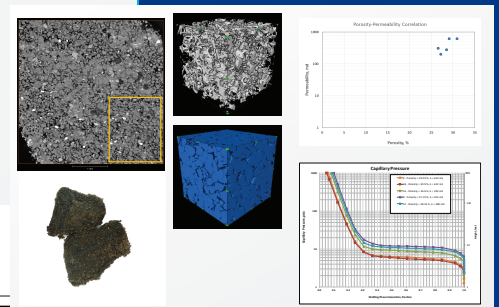
Like other operators, the appeal for more cost effective sample acquisition lead this Gulf of Mexico operator to acquire Percussion Sidewall Cores. However, due to the nature of acquisition, the cores were damaged, invaded and had large regions of unrepresentative rock. This limited the analytical measurements that can be performed on the sample.

Solution

From a thin section, ART™ searches the various databased thin sections in the various rock catalogs to find matching images. From those matches, the associated analog petrophysical properties and use to calculate an estimated and weighted set of petrophysical parameters for the input sample.

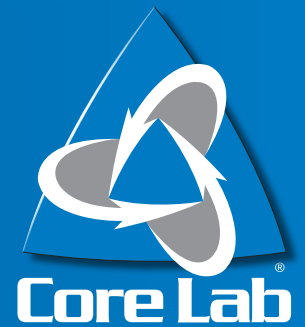
Results

The guided digitally targeting of zones with minimal grain disturbances yielded analytical results more representative of in-situ properties. The unaltered porosity results were **27.7% higher** than lab porosity on the full sample. More accurate rock properties on altered samples will allow for reserves that more accurately reflected potential production.



Doing More With Less

Percussion Sidewall Core Analysis



Unlock data from your rock in hours

Quickly identify low-resistivity pay, establish the presence of hydrocarbon, determine the productive capacity of the rock, evaluate thin bed sands contributions and determine gravel-pack size requirements.



Fast reporting times (hours, not days or weeks) Percussion sidewall core analysis within hours of receipt.



Measured properties Saturations, porosity and bulk densities directly measured.



Laser Particle Size Analysis For measured particle-size distributions and gravel-pack recommendations.



API estimates of oil quality Via refractive index. Indicator of gas presence via API combustible gas detector also determined.



Detailed Core Photography UV and WL, and/or minerals within the core.



Digital Rock Characterization Derived properties from MicroCT including Pc, Archie parameters and digital particle size.



Advanced Rock Typing Expert guided machine learning based analog search for routine and advanced petrophysical properties.



Strategic Solutions log modeling, data analytics, completion and drilling recommendations.



LamSpec proprietary model from LPSA, including Cap Pressure Simulation, Lamination-Specific analysis, and enhanced permeabilities.



Permeability Empirically derived based on descriptions and known values of Gulf sands.



Convenient Gulf Coast locations

Accelerate your data delivery with 24 hr access to any of our 3 Gulf Coast labs.

24 hr numbers

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