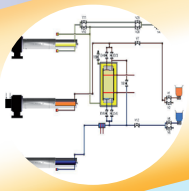
Sanchez Technologies

C.P.I.D.R.I.



Petrophysic

Capillary Pressure Imbibition Drainage Resistivity Index

CPIDRI

Generalities

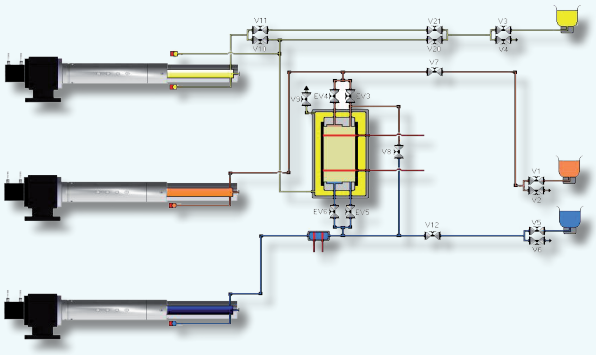
Knowledge of the water-oil capillary pressure and resistivity index vs. saturation relationship is necessary for many reservoir engineering tasks such as:

- calculate oil-in-place
- calibrated resistivity logs
- determine the height of the transition zone
- model oil displacement either by free water imbibition and/or water injection

CPIDRI is dedicated to the determination of three properties for reservoir evaluation which are:

- Electrical resistivity index
- Full Capillary Pressure Curve
- Wettability indices as function of core sample saturation

This system has been used to determine automatically the full capillary pressure and resistivity curves which are essential to evaluate the potential of oil recovery from reservoir.



Benefits

- Full data set obtained in a real time period
- High accuracy capacitance production measurement
- Automation and data acquistion software
- Direct capillary pressure curve measurement values
- Simultaneaous measurement of multiple core sample

ISO 9001 BUREAU VERITAS Certification

ST SANCHEZ TECHNOLOGIES - SAS au capital de 52 000 € -
Z.A. de l'Orme - BP 37 - 95270 Viarmes France
Tèl: +33 1 30 35 40 42 - Fax: +33 1 30 35 33 92 - **Email: contact@stfrance.fr - http://stfrance.com**
Siret 404 287 195 00022 - APE N°2562B

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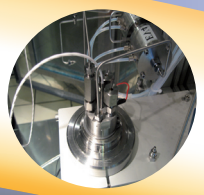

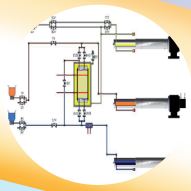

Petrophysic

Specifications

➔ Experimental conditions

- ✓ Confining pressure range.....700 bar
- ✓ Pore pressure range.....650 bar
- ✓ Capillary pressure.....+10 to -6 bar (ceramic)
- ✓ Max. working temperature.....up to 160°C (ceramic)
- ✓ Air bath temperature accuracy.....0.1°C
- ✓ LCR meter range.....1 to 3 KHz fixed value (1 to 100 KHz in option)
- ✓ Automation and data acquisition by FALCON® software
- ✓ Porous discs.....ceramic
- ✓ Wetted material...316 stainless steel and Hastelloy
- ✓ Resistivity measurement.....2 or 4 electrodes
- ✓ Core diameter.....1''1/2
- ✓ Core length.....1''1/2 to 3'' (max.80 mm)

➔ Measurements

- ✓ Oil and water pore pressure (time)
- ✓ Confining pressure (time)
- ✓ Temperature (time)
- ✓ Volumes of produced fluids (time)

➔ Results (derived from the measurements)

- ✓ Capillary pressure
- ✓ Interstitial water saturation (Swi)
- ✓ Residual oil saturation (SOR)
- ✓ Wettability index
- ✓ Resistivity index
- ✓ Formation index

➔ Oil reservoir injection and production pump

- ✓ 100 mL volumetric pump
- ✓ Volume accuracy.....10^{-4} mL
- ✓ Working pressure.....10 bar
- ✓ Working temperature.....160°C

➔ Confining pressure by automatic 300mL volumetric pump

➔ Water injectino and production measuring pump

- ✓ 100 cc volumetric pump
- ✓ Volume accuracy.....10^{-4} mL
- ✓ Working pressure.....10 bar
- ✓ Working temperature.....120°C

➔ Two coreholders configuration (option)

Our services

- ☞ Equipment delivered with 1st calibration
- ☞ Starting and training provided
- ☞ Maintenance contract Intervention within 2 to 5 days according to the country
- ☞ Immediate assistance by phone or email

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