



combined
with



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TECHNOLOGY & INNOVATION

QUALITY, GUIDANCE & CONSULTANCY

- Drilling Fluids & Cement
- Materials & Corrosion
- Chemistry Selection
- Quality Control & Flow Assurance
- Well Stimulation Concepts
- Reservoir Quality Prediction
- Sample Storage & Archive
- Formation Damage
- Reservoir Geometry & Flow Prediction

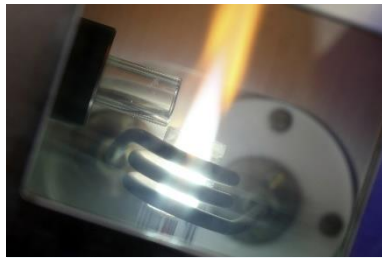
TECHNOLOGY & SERVICE CENTER

Leveraging technology, innovation
and services since 1958



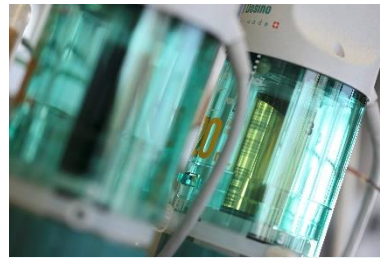
Drilling Fluids & Cement

- QA/QC of drilling fluids and cement slurries as well as their single components
- Optimization of mud and cement slurry formulations to meet operation-specific targets
- Assessment of fluid properties and compatibility with formations under HPHT conditions
- Measuring chemical and mechanical properties of cement slurries as well as kinetics of hardening cement



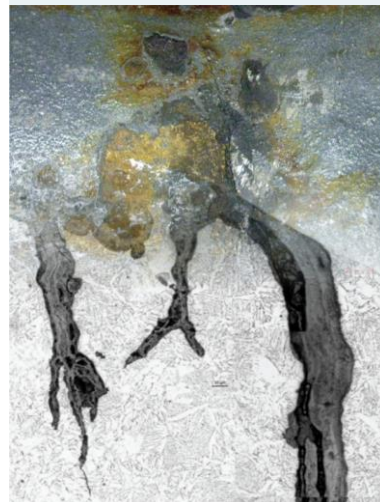
Gas & Oil Field Chemistry

- Quality assurance and optimization of gas, oil & water treatment processes
- Quality assurance and optimization of oil field chemicals
- Bacterial control
- Prevention and mitigation of near-wellbore damage
- Flow assurance regarding scale, waxes, emulsions, hydrates and bacteria



Materials & Corrosion

- Selection of appropriate material
- Root-cause analysis of corrosion and its possible prevention
- Mitigation of corrosion by inhibitors testing



Technology & Service Center PRODUCTION SERVICES

Our **DRILLING FLUIDS & CEMENT LAB** provides the basis for cost-effective selection of appropriate 3rd party products, root cause analysis of drilling problems as well as quality control of formulations and procedures.

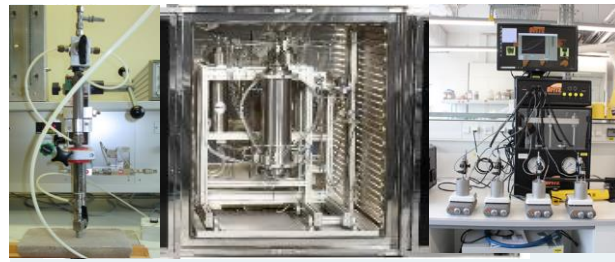
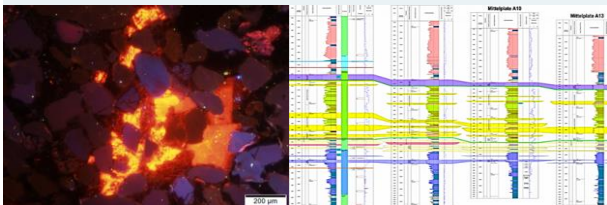
A multitude of chemistry-related aspects specific to the production of gas and oil are being addressed by our **GAS & OIL FIELD SERVICES**. Our **MATERIALS & CORROSION LAB** is equipped with a variety of characterization and testing methods. References from material and corrosion science as well as synergies with chemistry ensure cost-effective and customized solutions.

Contact Head of Production Services:
marcus.habighorst@wintershalldea.com



Reservoir Specialists Services

- SEM, QEMSCAN mineral mapping, CL, XRD
- High-res thin section scanning & archiving
- Qualitative & quantitative thin section analysis
- Core description
- Well correlation
- Facies mapping
- Wellsite geology (mudlogging)
- Warehousing services
- Sample cutting
- Slabbing & resination
- Core photography
- Core GR, Core-XRF
- Heavy mineral analysis
- Single grain study
- Geochronology
- XRF & TOC analyses
- Integrated chemo-biostratigraphy
- Organic geochemistry
- Vitrinite reflectance
- Spore colour index
- Microfossils
- Nannofossils
- Palynology
- Zonation schemes
- Palynofacies
- Archiving (core and geochemistry database)



Advanced Core Analysis & Digital Rocks Lab

- RCA & SCAL
- HPHT reservoir fluid characterisation (PVT) and fluid properties
- HPHT flooding (relative permeability, formation damage, reservoir blockage)
- HPHT EOR, flow assurance and storage (wax, hydrates, asphaltenes, S8, CCS)
- Consulting, training and modelling
- Coring and analytical program
- Data QA/QC
- Non-destructive core plug inspection
- Formation damage analysis
- Pore-scale analysis
- RCA property simulation
- SCAL property simulation for oil, gas or CO2
- Integrated digital-conventional lab programs
- QC and support of external labs
- Peer assists



Technology & Service Center RESERVOIR SERVICES

We offer a broad range of consulting and analytical services from nano- to basin-scale.

Our **RESERVOIR SPECIALISTS GROUP** are subject-matter experts in reservoir characterization, wellsite geology and big data handling.

The **ADVANCED CORE ANALYSIS & DIGITAL ROCKS LAB** characterizes reservoir fluids, conduct core flooding and petrophysical measurements, and provide state-of-the-art pore-scale analyses and simulations.

Our aim is to provide tailor-made solutions for reservoir characterization challenges. We work together with selected contractors to achieve this.

Contact Head of Reservoir Services:
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We look forward to working with you. Please do not hesitate to contact us.

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