

PRODUCTION
TECHNOLOGIES.
FULL SERVICE.

DEEP WATER
DEMANDS HIGH PERFORMANCE



Schlumberger

**MAXIMIZE PRODUCTION
FROM RESERVOIR TO REFINERY**



UNLOCK POTENTIAL OPTIMIZE PRODUCTION

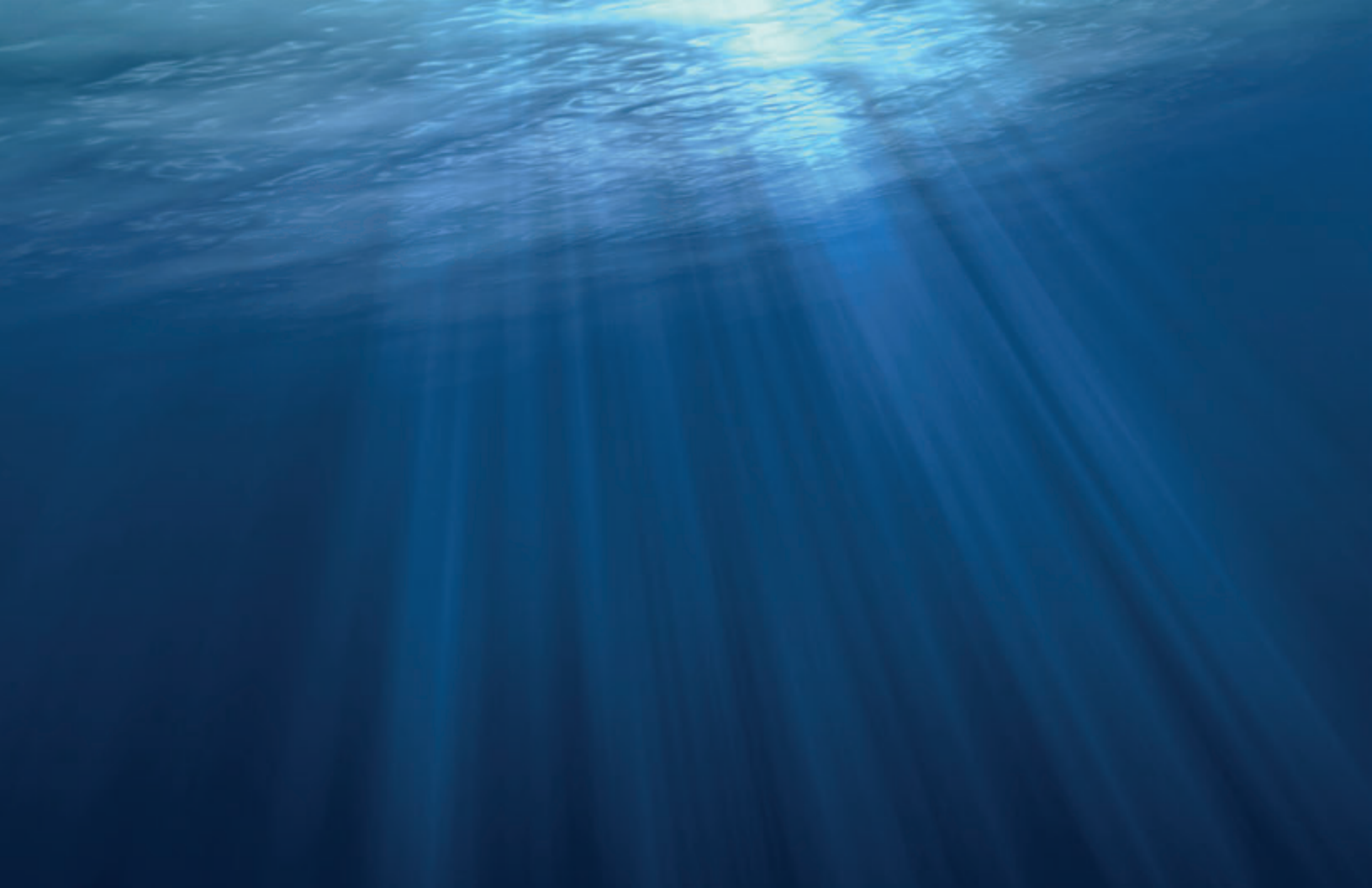
Schlumberger provides integrated production technology services that deliver tangible benefits and assurance to customers' worldwide oil and gas operations.

Firmly established at the forefront of technology, Schlumberger integrates pioneering chemical and process solutions, equipment, and software with unrivaled technical expertise.

Working with the world's largest oilfield services provider, customers benefit from a truly unique combination of outstanding technological capability, blended with a distinct understanding of how to successfully address their production challenges in an increasingly competitive marketplace.

Our global footprint and exceptional service delivery ensures that customers reliably, safely, and efficiently maximize production—regardless of system complexities or geography.

Schlumberger uses specialist research laboratories and field support operations to analyze issues across production operations and to engineer integrated solutions that help increase revenue and reduce operational costs through protecting asset integrity, safely maximizing production, and enhancing product quality.



DEEP WATER

DEMANDS HIGH PERFORMANCE

In demanding deepwater and ultradeepwater regions such as offshore Brazil, the Gulf of Mexico, and West Africa, Schlumberger provides trusted, high-performance technologies and services to protect assets and safely maximize production rates in even the most extreme, sensitive, and challenging conditions.

In deepwater applications, quality control increases in criticality. Therefore, products selected for these applications are developed and tested in our dedicated research and development center in Houston against the strict requirements of the deepwater program.

Deepwater products are assessed for viscosity, compatibility with fluids and process system materials, and cleanliness according to NAS and ISO standards.

As a company that provides both production and completion fluids technology, Schlumberger is ideally placed to meet these demands as every location worldwide has filtration packages to ensure that products meet these tight cleanliness specifications.

As a founding member of the Blockage Avoidance in Subsea Injection and Control Systems (BASICS) Joint Industry Project (JIP), which resulted in API Specification 17TR6, the company's technologists continue to set the standards for deepwater flow assurance.

OPTIMIZING FLOW ASSURANCE

Schlumberger chemical products and services give the industry more ways to protect critical process equipment, maintain pipework integrity, and assure production flow. Its specialty deepwater products are engineered to retain integrity and performance under the high-pressure, high-shear environments and long retention times of the subsea umbilical.

From scale and corrosion management to wax, asphaltene, and naphthenate inhibition, Schlumberger helps optimize process performance and maintain production, even in the most challenging conditions.





SYMETRI

DENDRIMER TECHNOLOGY

A step-change in production chemical delivery, Schlumberger SYMETRI* dendrimer technology delivers inhibitor chemistries that offer both high functionality and high activity, reducing the amount of inhibitor required to attain flow assurance requirements as much as four-fold and lowering chemical treatment cost per barrel of oil.

Inherent low viscosity and molecular stability renders SYMETRI technology ideal for application in deepwater and unconventional applications where injecting multifunctional, high-concentration products through long umbilical cores necessitates optimal product performance at all times.

Benefits

- Multifunctional chemistry
- High activity
- High stability
- Low viscosity
- Reduced infrastructure demands
- Enhanced safety and environmental profile

OPTIMIZED HYDROCARBON QUALITY

The company's wide variety of production chemicals and contaminant-removal products and services help maintain optimal hydrocarbon quality. Using tailor-made demulsifiers to swiftly resolve oil-in-water emulsions, Schlumberger ensures that customers achieve excellent dry crude quality and clean water required for discharge or reinjection.

Combined with purification solutions, fixed-bed media, and liquid scavengers, H₂S, mercury, and mercaptans are removed to meet export specifications and maximize gas sales revenues while reducing QHSE risk and protecting asset integrity.





MAXIMIZED PRODUCTION

DeScal* descaling, decontamination, and decommissioning service is an all-inclusive software, chemical, and mechanical service, which features purpose-built technology to manage and remove normally occurring radioactive material (NORM) to maximize throughput even at extreme water depths.

The integrated DeScal services package uses the latest mechanical technologies to complement the chemical components. Post-treatment analysis is provided using a proprietary diagnostic software package.

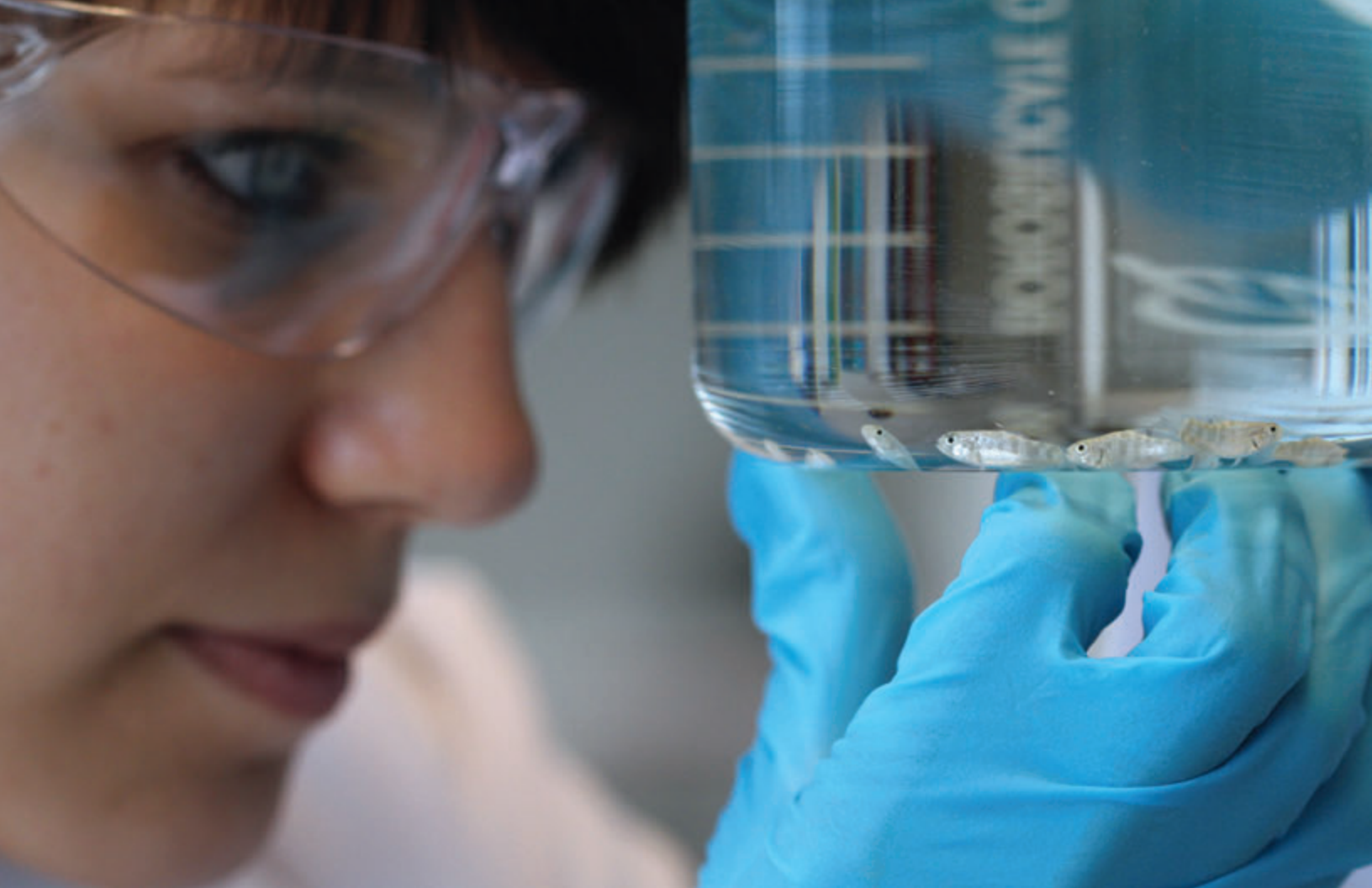
EXCELLENCE IN ENVIRONMENTAL STEWARDSHIP

Schlumberger's strength in ecotoxicity testing over 35 years, combined with expertise in produced water and sand process systems, results in a unique offering to assess, manage, and deliver excellence in environmental stewardship.

Supporting Schlumberger in the Eastern Hemisphere, the Bergen ecotoxicological testing facility is internationally renowned for balancing scientific thoroughness with the public safety concerns of regulatory authorities.

These efforts are further supported by the Houston laboratory, which serves the Western Hemisphere and offers marine, freshwater, and terrestrial testing, and coordinated with the Norway facility to provide routine testing and evaluation of new and existing products, as well as the development of new tests.

This positions Schlumberger as the partner of choice for exploration in ever-deeper water, unconventional formations, and increasingly hostile environments that require a more sophisticated portfolio of chemical technologies.



Case Study

SCALE FORMATION PREVENTED IN DEEPWATER FLOWLINES, OFFSHORE CONGO, WEST AFRICA

CHALLENGE

The flowlines of a deepwater oilfield in 1,400 m of water encountered flow-assurance problems including scale deposition. Chemical injection was challenging, as the FPSO vessel was 140 km offshore. Any inhibitor needed to withstand severe conditions and not degrade over prolonged residence periods.

SOLUTION

Formulated for deepwater use, DS-1618 scale inhibitor was selected. Initial testing ensured that it would remain pumpable at high pressures, avoid blocking subsea umbilicals, and be fully compatible with the produced water. The inhibitor's compatibility with a wide range of elastomers, plastics, and metals was also evaluated.

RESULTS

Since injecting 75–100 ppm of DS-1618, there have been no scale-related flow assurance problems. The deepwater chemical umbilical and injection equipment have remained blockage free.



GLOBAL PRESENCE, OUTSTANDING CAPABILITY



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- Global workforce
- Scale and footprint
- Mergers and acquisitions track record
- Executorial capability

UNLOCK POTENTIAL

OPTIMIZE PRODUCTION



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