

1 1.0079  
**A**  
APPLICATION

4 9.0122  
**D**  
DISTILLATION

22 47.867  
**V**  
VALIDATION

1 1.0079  
**A**  
ACTIVATION

14 28.086  
**N**  
NOTIFICATION

3 6.941  
**C**  
CALIBRATION

5 10.811  
**E**  
EVALUATION

4 9.0122  
**D**  
DEDICATION

**UPSTREAM SERVICES – ADVANCING THE OIL & GAS INDUSTRY**



# A

APPLICATION

# ADVANCING

## ONSHORE AND OFFSHORE FIELDS WITH TECHNICAL SERVICES AND SOLUTIONS

### ABOUT SGS

SGS is the world's leading inspection, verification, testing and certification company. Recognised as the global benchmark for quality and integrity, we employ over 80,000 people and operate a network of more than 1,650 offices and laboratories around the world. We are constantly looking beyond customers' and society's expectations in order to deliver market leading services wherever they are needed.

We help customers all over the world operate in a more sustainable manner by improving quality and productivity, reducing risk, verifying compliance and increasing speed to market. Our range of services covers all industry sectors and touches the products and services that consumers around the world rely on countless times in their everyday lives.

From the energy that powers our cars and homes, to the food on our plates and the clothes on our backs – and everything in between – SGS provides independent services that make a difference in people's lives. At the end of the day, our value lies in what our services make possible for our customers and, ultimately, for their consumers.

### OUR OIL & GAS SERVICES

We provide innovative services and solutions for every part of the oil and gas industry. Our global network of offices and laboratories and our dedicated team allow us to respond to your needs, when and where they occur. Our reputation for independence, excellence and innovation have established us as the

market leaders in providing services that improve efficiency, reduce risk and deliver competitive advantage for you.

Ultimately, every player in the value chain benefits from the innovations and quality of the products that come from the oil and gas sector – everything from transport fuel and heating oil to plastics, fertilisers and pharmaceuticals. Using innovation, and a deep understanding of the global market, we help you in optimising and managing risk.

As a leading solutions provider for the oil and gas sector, our robust technology, innovative approach, technical support and dedication to quality and safety bring you tangible benefits, in both the upstream and downstream sectors.

With a wide range of services and solutions leveraging expertise from many areas of the SGS Group, including oil and gas industry services, minerals services, industrial services, environmental services and certification and audit services, we empower you to outperform in today's marketplaces. Risk management, supply chain monitoring and compliance activities are all part of the services we provide that help optimise your business.

### UPSTREAM OGC SOLUTIONS THAT LOCATE, ANALYSE AND EXTRACT

Our services for the upstream sector help you locate, analyse and extract oil and natural gas from onshore and offshore fields. From exploration, appraisal and development to production and logistics, we offer a variety of services and solutions that cover

the entire upstream sector.

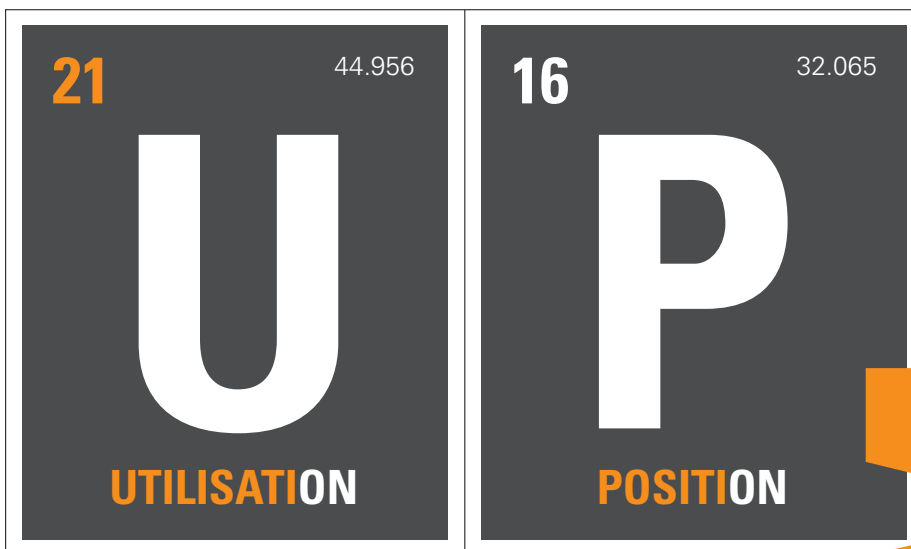
The main focus of our services and solutions in the sector are:

- Exploration, appraisal and development studies
- Design and commissioning of laboratories and metering systems
- Production operations

Exploration, Appraisal and Development

We provide geological analysis for prospect generation, frontier exploration, field appraisal and development planning:

- Seismic processing and imaging, analysis and interpretation
- Reservoir geology, sedimentology studies, structural and basin modeling
- Geo-analytical solutions including geochemistry, optical petrology, X-ray diffraction (XRD), Qemscan and scanning electron microscopy (SEM) analysis (advanced reservoir quality services – ARQS)
- Petrophysical analysis, properties determination, log interpretation
- Reservoir engineering, dynamic modeling and history matching, production forecasting, sensitivity analysis
- Facilities design and supervision, network modeling and flow assurance
- Asset value assurance including equity re-determination, reserve and technical audits, and competent persons reporting (CPR)
- Reservoir fluids analysis using the pressure-volume-temperature (PVT) equipment and other advanced techniques



# UPSTREAM

- Onsite analysis through the use of mobile laboratories
- Oilfield mercury analysis, crude oil assays and profiling
- Well testing services
- Cased hole services including well integrity measurements, well intervention services and downhole sampling
- Sample management

## Design and Commissioning

Our experience in laboratory and metering design and commissioning allows us to help you by:

- Designing, equipping and commissioning onsite production laboratories
- Providing advice and consulting services on fiscal and allocation measurement and hydrocarbon allocation
- Conducting and producing fiscal and allocation uncertainty studies for both regulatory and contract purposes
- Validating metering systems through acceptance testing either onsite or at the factory
- Conducting factory and onsite calibration using water, gas or hydrocarbons as calibration mediums
- Providing comprehensive project specific or general training on various topics
- Offering production technology services that provide onsite support integrated with geoscience, reservoir and well engineering services

## Production Operations

With our expertise throughout all aspects of production operations, we provide:

- Drill pipe and bottom hole assembly (BHA) inspections
- Cased hole services including e-line and slickline for well integrity measurements, well intervention services and downhole sampling
- Laboratory services including technical support, operations management, technical staff equipment and facility rental
- Metering services to accurately measure the amount of hydrocarbons extracted and produced
- Measurement and analytical services necessary to operate hydrocarbon allocation systems
- Technical staffing
- Technical screening, support, engineering and evaluation services for underground gas storage including CO<sub>2</sub> sequestration and gas injection for enhanced oil recovery (EOR) applications
- Asset Value assurance including equity re-determination, reserve and technical audits, and competent persons reporting (CPR)

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**FOR MORE INFORMATION ABOUT  
UPSTREAM SOLUTIONS FROM SGS,  
CONTACT [OGC@SGS.COM](mailto:OGC@SGS.COM) OR VISIT  
[WWW.SGS.COM/OIL-GAS/UPSTREAM](http://WWW.SGS.COM/OIL-GAS/UPSTREAM)**

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WHEN YOU NEED TO BE SURE

