

EXPLORATION
PRODUCTION
TRANSPORTATION
OPTIMISATION
DEDICATION
VISION

SERVICES FOR EVERY PART OF THE OIL, GAS AND CHEMICALS INDUSTRY

SGS

SWITCH ON TO A REAL ADVANTAGE WITH THE MARKET LEADER

Over the next twenty years, global demand for energy will increase by more than 50%. Where will it all come from? How far will you have to go to get it? We are the leaders in providing innovative solutions to tomorrow's energy needs today.

Solutions that manage risk.

Solutions that improve quality.

Solutions that maximise returns.

We provide innovative services and solutions for every part of the oil, gas and chemicals 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 the quality of the products that come from the oil, gas and chemicals 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 the leading solutions provider for the oil, gas and chemicals 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, Gas & Chemicals Services, Agricultural Services, Minerals Services, Systems & Services Certification, Industrial Services and Environmental 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.

**SWITCH ON TO YOUR OPTIMISATION
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**SOLUTIONS FOR OIL, GAS & CHEMICALS
THAT GO ON AND ON AND ON...**

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 and appraisal
- Laboratory and metering design and commissioning
- Production operations support

EXPLORATION AND APPRAISAL

Within exploration and appraisal, our experts:

- Provide geoscience services through seismic data
- Handle geological analysis for prospect generation, frontier exploration, field appraisal and development planning
- Deliver petrophysical services to help you design optimal logging, coring and testing campaigns
- Supply reservoir engineering services for the construction, maintenance and application of reservoir simulation models
- Analyse and study reservoir fluids using the Pressure-Volume-Temperature (PVT) technique and other advanced techniques
- Conduct onsite analysis through the use of mobile laboratories
- Perform oilfield mercury analysis, crude oil assays and profiling
- Conduct well site testing services
- Perform sample management
- Carry out drill pipe and bottom hole assembly inspections

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 SUPPORT

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

- Well maintenance
- Wireline and slickline well intervention services
- Well technology services to supply full Field Development Planning lifecycle services
- 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 for production operations

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ONSITE LABORATORIES IN THE HARSHTEST OF ENVIRONMENTS

How do you cut down turnaround time on shipping hazardous materials samples back and forth between remote locations and laboratories? Bring the laboratory onsite. Our FluidPro™ Mobile Laboratories offer onsite Pressure-Volume-Temperature (PVT) studies, production chemistry, sampling services and high pressure / high temperature fluid transfer services. Each unit is built to operate in the harshest of environments and is certified for use in oilfield hazardous areas (A60 / Zone 1). All units are staffed by certified chemists to ensure the highest standards of quality and service – onsite and on demand.

FluidPro™ laboratories can be operated on-platform for testing while drilling, at a centralised shore base or as stand-alone

laboratories in remote locations. The equipment and instrumentation used in our mobile laboratories offer comparable capabilities to those of fixed laboratories. In addition, the PVT Chemists that operate the labs are 3rd-party certified and must pass a rigorous internal training programme to become a FluidPro™ Operator. Finally, the mobile labs are monitored by a highly experienced SGS QA/QC team with remote access via phone and internet.

We are committed to providing high quality data and excellent service on your timeline, the FluidPro™ mobile laboratory is just one example of our commitment.

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 UPSTREAM SERVICES, VISIT
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STREAMLINE

SOLUTIONS THAT REFINE, PROCESS AND DELIVER

From the processing, storage and transportation of crude oil and natural gas to refining, distribution and retail services, our downstream offering empowers you to maximise quality and efficiency and increase the safety of your operations.

Throughout the downstream sector, we provide solutions in the areas of:

- Refining and processing
- Logistics
- Distribution and retail

REFINING AND PROCESSING

In the refining and processing of crude oil and natural gas, we help you by providing the following services:

- Laboratory testing, design and outsourcing to help maximise your profits or reduce capital outlay
- Outsourced plant and terminal operations to optimise operational efficiency
- Metering and calibration to ensure accurate determination of volume and quality
- Value added blending to optimise components and product quality, and cargo treatment to cost effectively modify quality parameters that impact cargo handling, safety and contractual obligations
- Measurement, sampling and analysis services at custody transfers
- Outsourcing sample handling and distribution
- Collateral management to mitigate your risk
- Biofuels blending to optimise returns on alternative fuels production and the appropriate and efficient use of additives

LOGISTICS

Throughout the hydrocarbon supply chain, we provide services that focus on logistics, including:

- Bunker fuel surveys, monitoring and analysis to ensure both the quality of the fuel used and the amount delivered
- Tank cleanliness inspections
- Voyage analysis and demurrage allocation

- Expediting services
- Vessel on hire and off hire surveys
- LNG services
- Full outturn guarantee (FOG)

DISTRIBUTION AND RETAIL

In the distribution and retail phase, we specialise in:

- Fuel integrity, marker and quality programmes to detect and prevent adulteration
- Quality compliance programmes
- Emergency response services that provide rapid and effective response in case of spillage and similar incidents

FUEL MARKING SOLUTIONS IN KENYA

Continued expansion of demand and the high price of oil will only fuel the threat from those who seek to profit from its adulteration and other forms of illegal trade. Our Fuel Marking Services protect the integrity of supplies to the energy production, transport, heating and domestic use sectors. This ensures that governments and fiscal regulators collect the appropriate amount of revenue from excise taxes on fuel and at the same time also protect sales revenues for oil companies. The services prevent and deter:

- Fuel adulteration with sub-standard products or low tax (subsidised) fuels;
- The illegal import of no or low tax products (smuggling);
- The dumping of tax exempt export or transit fuels into a domestic market; and
- The export of subsidised fuels.

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STREAM

In Kenya, the government instituted a nationwide programme using our services to curb the illegal dumping of export fuel and the adulteration of premium automotive fuels with low tax kerosene. This programme was first introduced in 1998 and continues to this day. Under the programme, all export fuels are marked at very low concentrations with quantitative and qualitative markers. This allows not only the detection of illegal export fuel in the domestic market but also the quantification of the amount of illegal fuel present. A different marker using the same technology is used to mark the low tax (subsidised) kerosene sold throughout the country. Fuels are tested across the country at retail sites and other storage locations using field test kits that provide results within a few minutes. The markers can be detected even after attempts have been made by perpetrators to launder the products free of the markers.

The benefits to both consumers and the Kenyan government are clear: our service results in reduced illegal trade, protection of tax and sales revenues, increased consumer confidence, protection of vehicle engines, improved exhaust emissions and environmental protection. The success of the Kenyan fuel marking programme has led to implementation of similar programmes in other countries around the world, including India, Tanzania, Uganda, Senegal and South Africa.

In addition to the usual fuels, like gasoline, diesel (gas oil) and kerosene, it is also possible to mark Liquefied Petroleum Gas (LPG) to address similar problems that occur with domestic gas and automotive LPG which is increasingly being used in many countries worldwide.

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