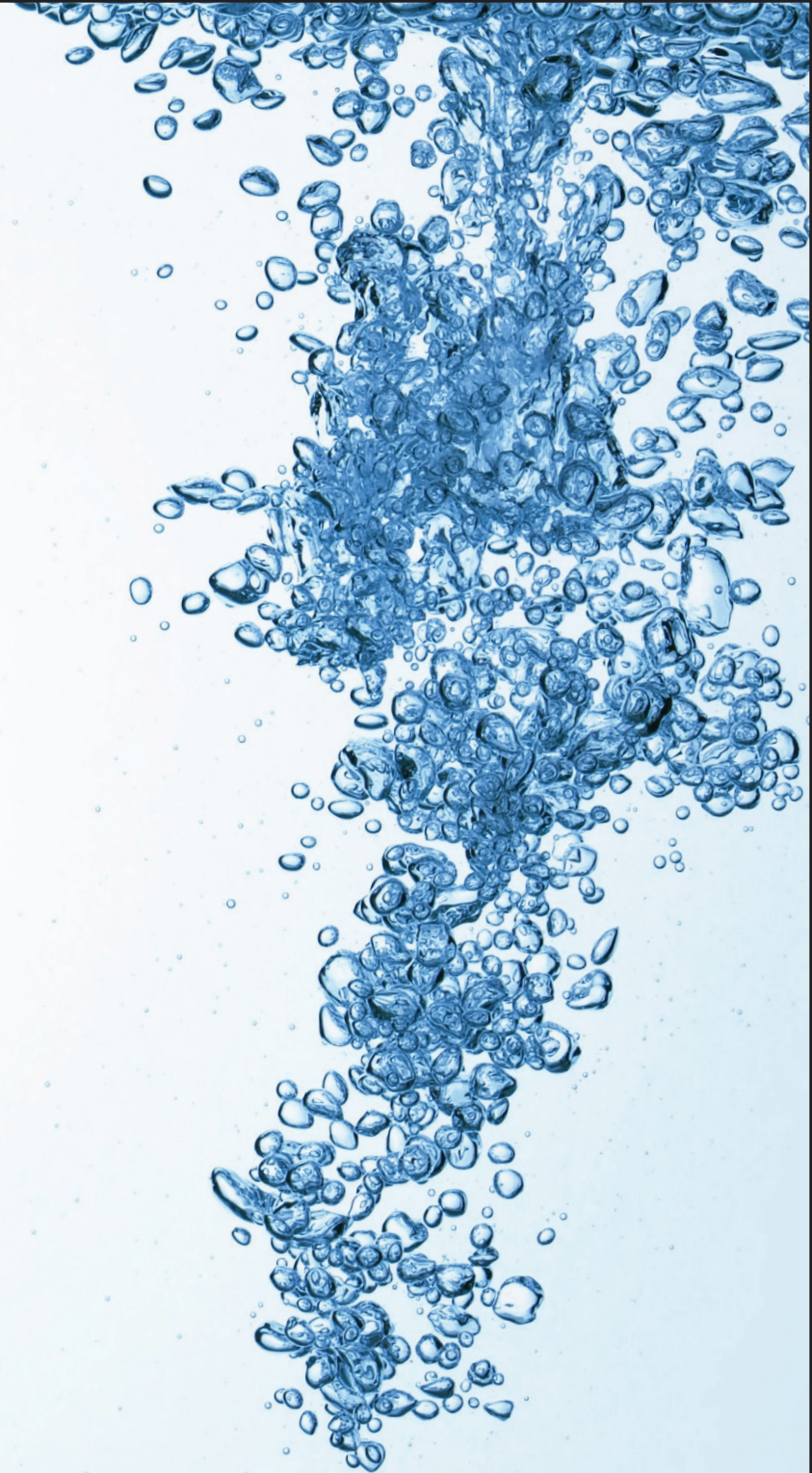




Drilling Fluids &  
Waste Management

**WE CIRCULATE  
KNOWLEDGE, TECHNOLOGY &  
EXPERIENCE IN YOUR WELL**



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# ABOUT US

We are innovating for tomorrow and we are helping to make today better for our clients.

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## **VISION**

To be an international leading company providing drilling fluids and waste management services.

## **MISSION**

To provide solutions that will create value for our business partners with innovative, scientific, ethical, eco-friendly and sustainable understanding in drilling fluids and waste management services.





# CORE VALUES



## HEALTH AND SAFETY

The health and safety of our people and environment is our top priority. We are committed to minimizing safety risks and making sure that all possible measures are in place.



## CUSTOMER SATISFACTION

All of our decisions are taken with the customer in focus. We are operating with the aim of achieving common objectives with the clients and the local regulations.



## INTEGRITY

Our employees' and corporate actions are bounded by honesty and ethical conduct. We strive to do what is right and what we promised.



## SOLUTION FOCUS

We use a "solution-oriented" approach and broader perspective when resolving problems for our clients.







## **Who We Are?**

Geos is a full-service drilling fluids company headquartered in Ankara, Turkey. We provide one of the most comprehensive range of products and services in Drilling Fluids Industry; from spud mud to non-aqueous drilling fluids, from shale shakers to drilling waste disposal services.

## **What We Deliver?**

With a strong dedication to customer service excellence, we are providing:

Drilling Fluid Systems & Products  
Solids Control & Waste Management Services  
Quality Control & Laboratory Services  
Mud School and other Industry Trainings

## **Why GEOS?**

Our success is a result of highly skilled engineers, high quality products, innovative solutions and timely delivery. GEOS is operating with the highest environmental standards to reduce environmental footprint and achieve common objectives with it's clients and the local regulations.

We are committed to Research and Development in every aspect of our services. GEOS Technology Center (GTC) is established to provide innovative solutions for the industry.



# **TECHNOLOGY CENTER**

**WE INTRODUCE NEW METHODS, IDEAS AND PRODUCTS**  
**WE COLLABORATE**  
**WE INNOVATE**

GEOS TECHNOLOGY CENTER (GTC) is oriented towards improved and innovative technologies, processes and products. We perform research studies on drilling fluid systems, products, solids control and waste minimalization. Our main focus is to develop solutions to meet our clients' need, to cut their overall drilling and waste costs, to reduce non-productive time.

GEOS is not only concerned with providing solutions just to reach target depth, we are also providing the new technology fluids and solids control processes to maximize production from the reservoirs.



**Wear proper PPE  
and keep them in a  
good condition**



**Handle Chemicals  
Safely and  
according to their MSDS**



**Do not exceed max  
temperature and  
pressure limits of  
any lab equipment**



**Stay at a safe distance  
from lines with high-  
pressure at location**



**Do not  
work-walk-drive  
under a  
suspended load**



**Protect yourself  
against a fall  
when working at high**



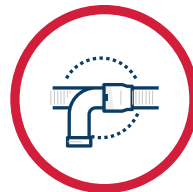
**Do not smoke outside  
the designated  
smoking area**



**Do not use phone when  
walking and watch  
your head at all times**



**While driving,  
do not use your  
phone and do not  
exceed speed limits**



**Wear seat belt, and  
make sure all the  
passengers wear their  
seat belts in the car**



**Communicate clearly  
to make sure the task  
is understood by  
all parties**



**Help increasing  
safety awareness at  
work, at home and  
everywhere else**



**Report  
immediately the  
nonconformity  
situation or unsafe act**



**Stop unsafe work,  
you have the authority**



## QHSE at GEOS

We know that QHSE management is the key to the success and sustainability of our operations. That is why we constantly seek to improve our internal QHSE procedures and standards.

We are committed to minimizing safety risks and making sure that all possible measures are in place to protect the health and safety of our employees and who are associated with our operations.

We focus on training of our employees to ensure operations are always carried out safely, and to the international standards.

## GEOS QHSE Objectives

At GEOS we use performance monitoring system (KPI Scorecard) with yearly QHSE goals for each employee in the organization. We are committed to improve our QHSE system continuously by measuring, reporting and benchmarking the performance.



## GEOS Have Three Core QHSE Goals

- Zero QHSE incidents
- Improving safety culture everywhere we operate
- Ensuring 100% compliance with all applicable regulations







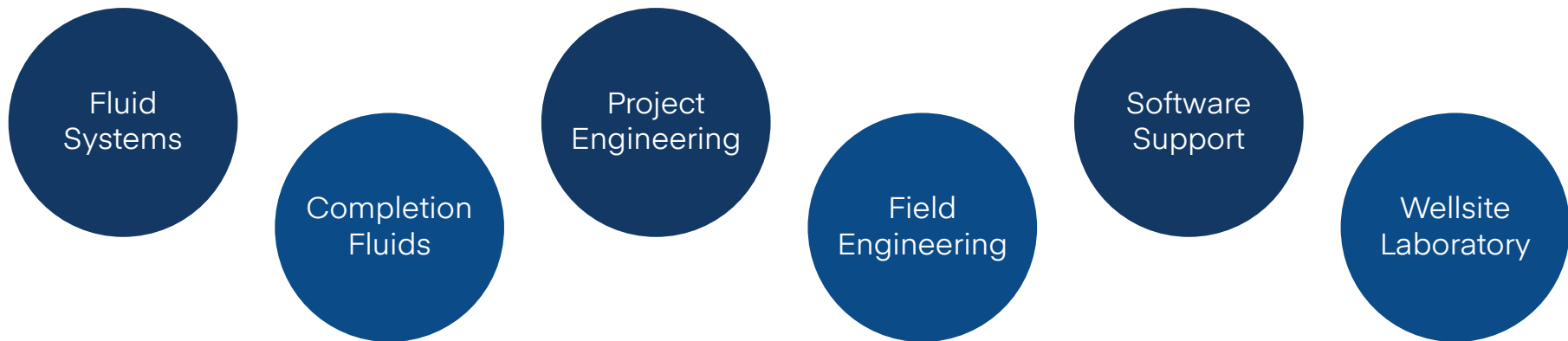
# **DRILLING FLUIDS SERVICES**

**TAILORED FLUID SYSTEMS & PRODUCTS  
FOR COST EFFICIENT SOLUTIONS**

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We are designing our drilling fluid systems to meet the specific challenges of each project. Drilling Fluids segment works closely with GEOS Technology Center to design drilling fluids systems based on project-specific technical needs. Risk analysis are performed for each challenging project to provide cost-effective and best possible solutions.

GEOS combines six functions to provide tailored drilling solutions in excellence:



We provide water-based, oil-based and synthetic-based systems and associated ranges of specific additives to address various downhole challenges.

## **Water Based Drilling Fluids**

- Conventional Drilling Fluids
- High Performance Drilling Fluids
- HPHT Drilling Fluids
- Reservoir Drill-in Fluids

## **Non-Aqueous Drilling Fluids**

- Invert Emulsions
- Relaxed-Filtrate Systems
- HPHT Drilling Fluids
- Reservoir Drill-in Fluids

## **Completion Fluids**

- Chloride Based Brines
- Bromide Based Brines
- Formate Based Brines

## **Water Based Mud Additives**

- Alkalinity Control Additives
- Bactericides
- Corrosion Inhibitors
- Deflocculants
- Defoamers
- Fluid Loss Reducers
- Lost Circulation Material
- Lubricants
- Salts
- Scavengers
- Spotting Fluids
- Surfactants & Foamers
- Viscosifiers
- Weighting Agents
- Wellbore Stability Additives

## **Oil Based Mud Additives**

- Fluid Loss Reducers
- Rheology Modifier
- Primary Emulsifier
- Secondary Emulsifier
- Viscosifiers
- Wetting Agents

## **Synthetic Based Mud Additives**

- Base Fluids
- Fluid Loss Reducers
- Primary Emulsifier
- Secondary Emulsifier
- Rheology Modifier
- Viscosifiers
- Wetting Agents







# **WASTE MANAGEMENT**

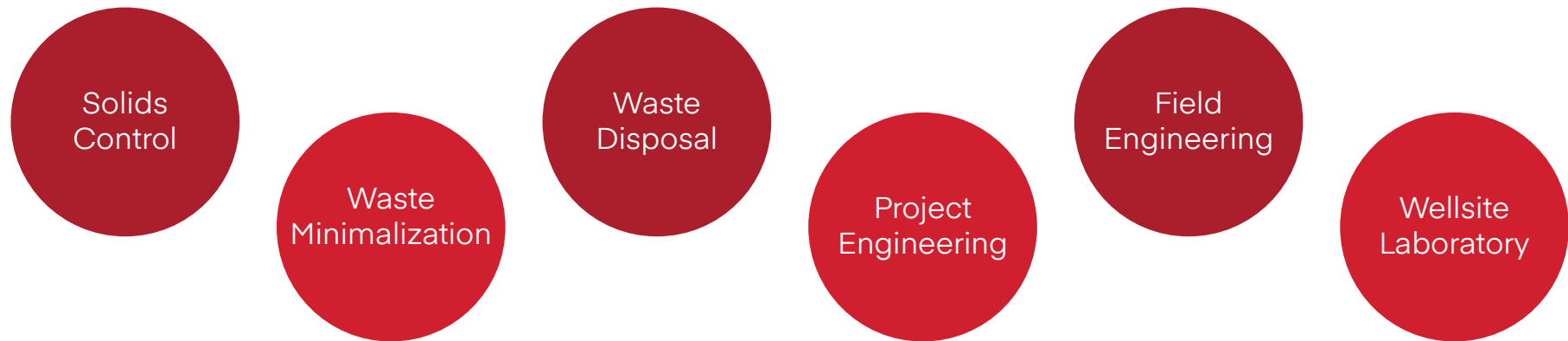
**MAXIMIZE DRILLING PERFORMANCE &  
MINIMIZE ENVIRONMENTAL FOOTPRINT**

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Our project-specific Solids Control & Waste Management solutions are to support our customers to maximize drilling performance and to achieve QHSE compliance and reduce cost of ownership. We provide our customers with fully integrated Solids Control, and Waste Management solutions in compliance with local regulations and environmental laws.

GEOS combines six functions to provide tailored Solids Control & Waste Management solutions:



### **Waste Management Strategy**

GEOS attached great importance to environmental awareness and invested in waste management systems that focuses on reducing drilling waste at source and reusing it further in drilling and non-drilling related activities.

An effective drilling waste management strategy is required for eliminating as much drilling waste going to landfill as possible, maximizing recovery and reuse of material at source. We work closely with our clients, construction companies and rig contractors to optimize solids control and waste management system configurations based on project needs.

GEOS's waste management system relies on the hierarchy below:

- **DESIGN** project specific wellsite construction design
- **REDUCE** drilling fluids discharge by efficient solids control
- **REUSE** drilling fluids by recovering from wet drilled cuttings
- **RECYCLE** water by dewatering and maximizing water recovery from waste and rain water
- **TREAT** waste with chemicals for stabilization
- **DISPOSE** waste - waste transportation & disposal

EQUIPMENT	FUNCTION
Drying Shaker	Drilling fluids recovery from wet drilled cuttings
Decanting Centrifuges	Fine solids removal from the active mud volume & Solids removal from waste water when dewatering
Chemical (Floc.) Unit	Chemical mixing systems, tanks, dosing pumps, flow meters.
Half-Moon Tanks	Act as storage pit for recovered fluids from Drying Shaker before processing with decanting centrifuge
Hopper (Mixing) Tank	Storage & pretreatment of waste water and drilling fluids before processing
Centrifuge or Diaphragm Pumps	Waste water and drilling fluids transfer between pits
Polyethylene storage tank	Recycled water storage
Screw Conveyors	Cuttings/Solids transport from rig shaker to drying shakers

Ex 20°C ± 1m





# LABORATORY SERVICES

Our lab services bring expertise to our customers' projects in order to solve drilling and completion problems. Through utilization of our central and wellsite lab facilities, we design customized fluid systems and offer solutions to challenging drilling problems.

GEOS have full-service laboratory for research and development studies, drilling fluids design and product quality assurance. In addition to standard drilling fluids laboratory test equipment, a variety of specialized equipment is used in our central laboratory to address a wide range of operational issues related to well construction, completion, and production.



# SHORT COURSES

GEOS provide short courses for professionals involved in drilling, completion or production operations.

GEOS is recognized as the industry's trusted partner for training and competency development. Our partnership with the best universities, instructors and industry professionals makes our courses unique with respect to the balanced combination of theoretical and practical approaches.

The following courses are immediately available upon request.

- Drilling Fluids Technology
- Completion and Workover Fluids
- Formation Damage
- Drilling Hydraulics
- Well Control
- Underbalanced Drilling

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