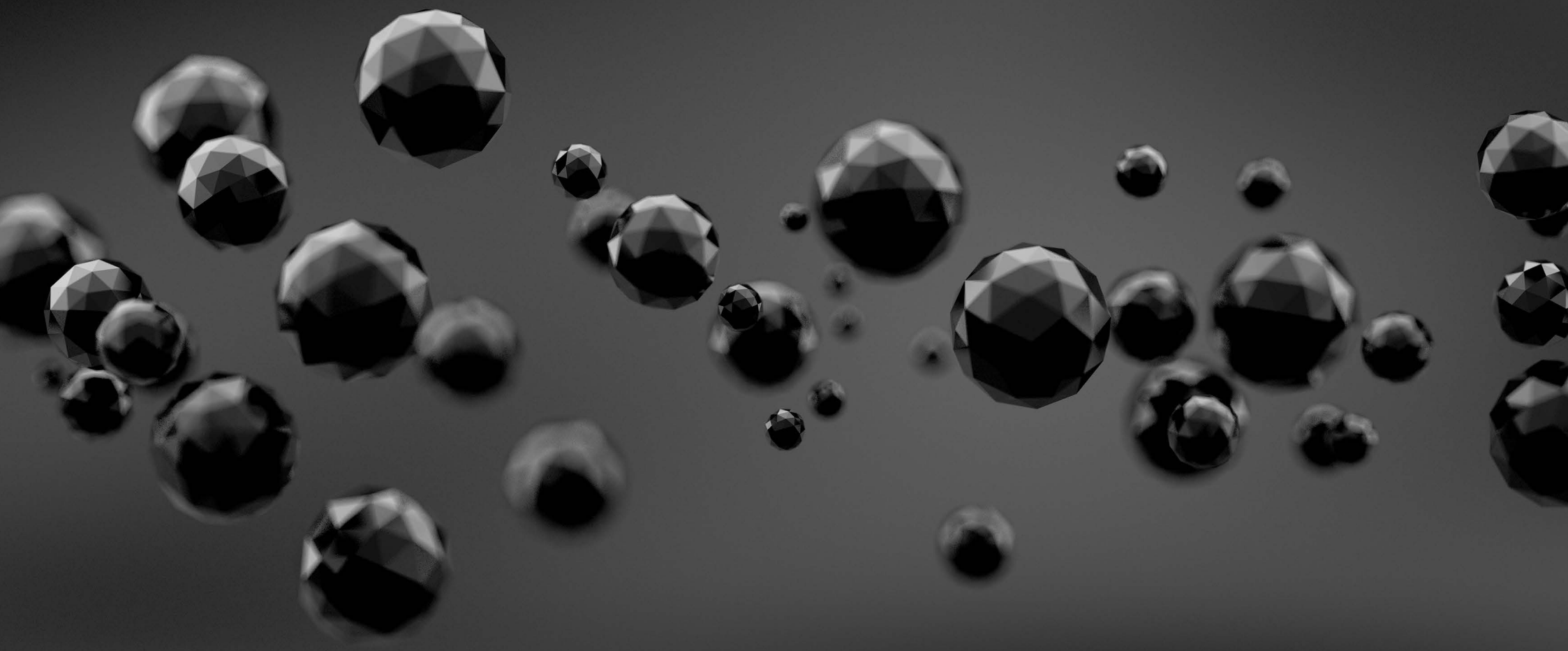




МИРРИКО  
ГРУППА КОМПАНИЙ

CHEMICAL AND TECHNOLOGICAL  
SOLUTIONS FOR DRILLING,  
CEMENTING, AND OIL PRODUCTION



- Chemical and technological solutions for drilling, cementing and oil production

# Business Domains of Chemicals for Drilling and Production Business Unit (CDP BU) of the Mirrco Group



## TRADING

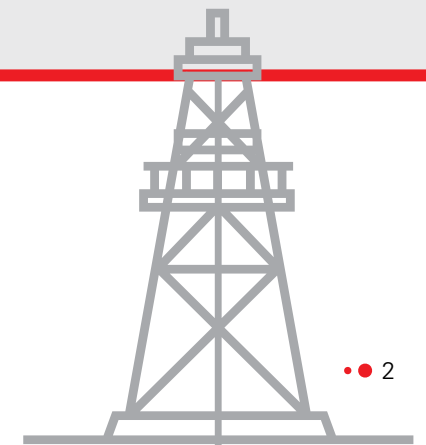
- **WELL CONSTRUCTION**  
Chemicals for drilling fluids (water-based), well construction (oil-based), and cement slurries.
- **OIL PRODUCTION**  
Chemicals for bottom-hole zone treatment, water shut-off, injection profile conformance, squeeze cementing, and hydraulic fracturing.

## ENGINEERING

- **CREATING SYSTEMS OF DRILLING FLUIDS AND CEMENT SLURRIES.**
- **SELECTION OF PROCESS FLUIDS FOR OIL PRODUCTION AND HYDRAULIC FRACTURING.**
- **ENGINEERING SUPPORT IN THE IMPLEMENTATION OF THE DEVELOPED CHEMICAL SOLUTION.**
- **AUDIT AND SUPERVISION.**

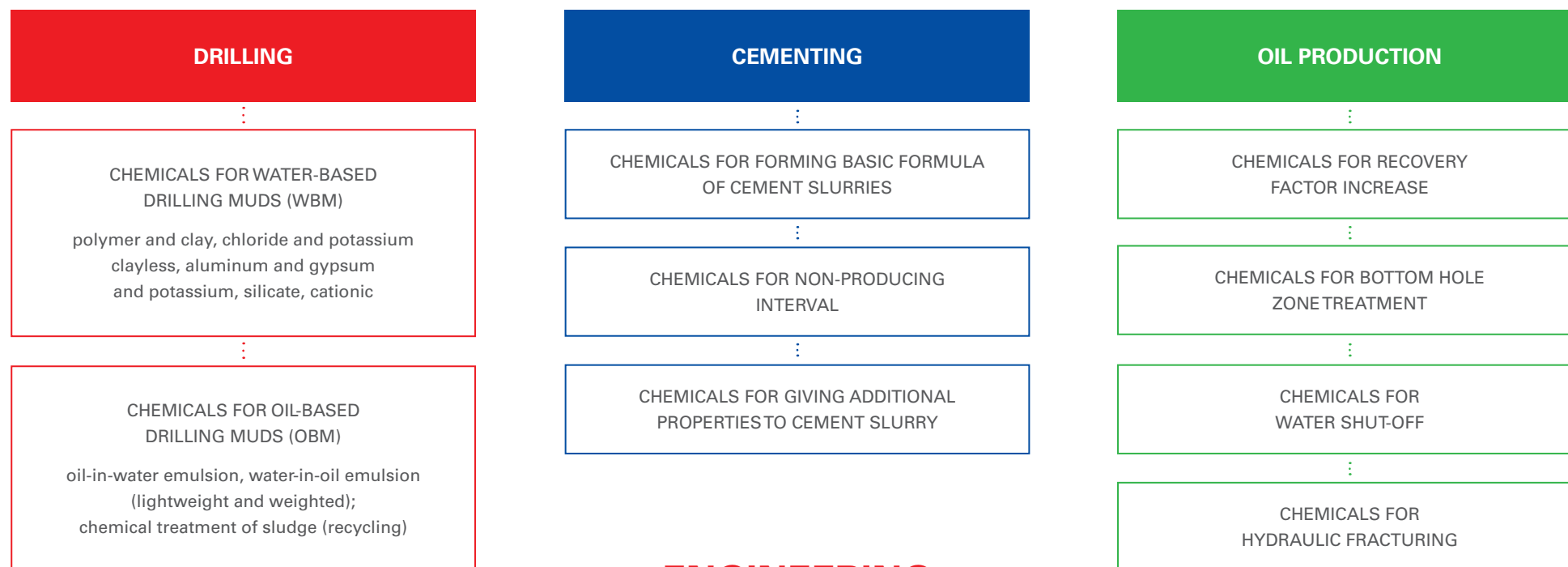


The CDP BU includes both standard drilling mud systems for the most common wellfield conditions and innovative technologies to resolve specific issues and bottlenecks occurring during drilling, cementing and oil production.



# Business Domains of Chemicals for Drilling and Production Business Unit

## TRADING\*



## ENGINEERING



\* See full range of chemical products on pages 6-10 and application practice on pages 12-14.

## What you need to know about the CDP BU

**10+**   
**YEARS ON THE  
MARKET**



**OWN CHEMICAL  
PRODUCTION**

OPU-30 plant  
(Almetyevsk, Tatarstan)

**WELL  
DEVELOPED  
WAREHOUSE  
NETWORK**



**R&D**

In-house R&D center  
and a network of regional  
laboratories equipped  
according  
to international standard  
ISO 10416:2008



**QUALIFIED  
STAFF**

Knowledge of testing methods,  
drilling standards and standards  
of chemical raw materials,  
oilfield experience



**REPUTATION OF  
A RELIABLE SUPPLIER  
OF CHEMICALS TO  
ALL RUSSIAN OIL  
COMPANIES**

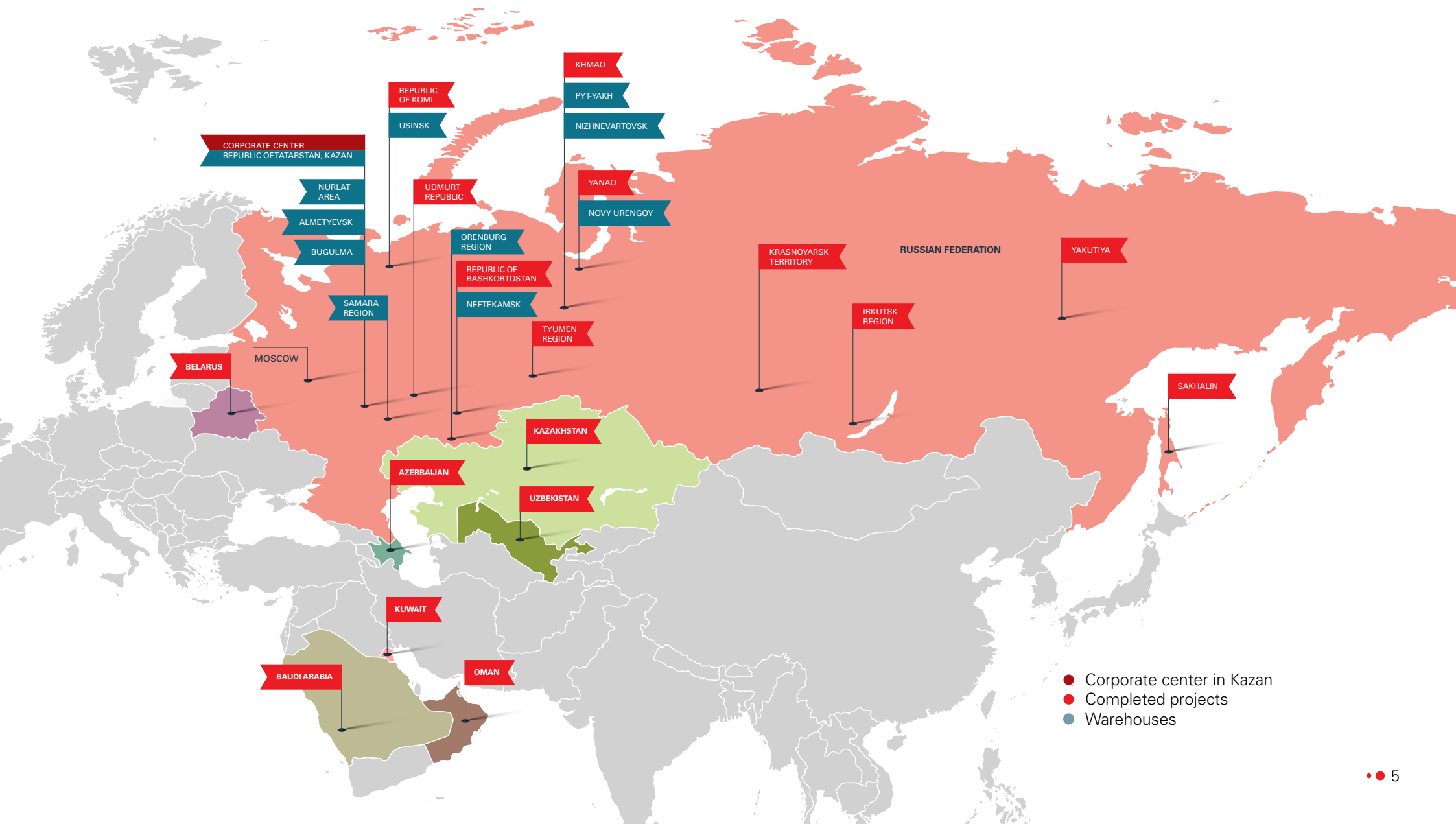


**INTERNATIONAL  
CERTIFICATION**

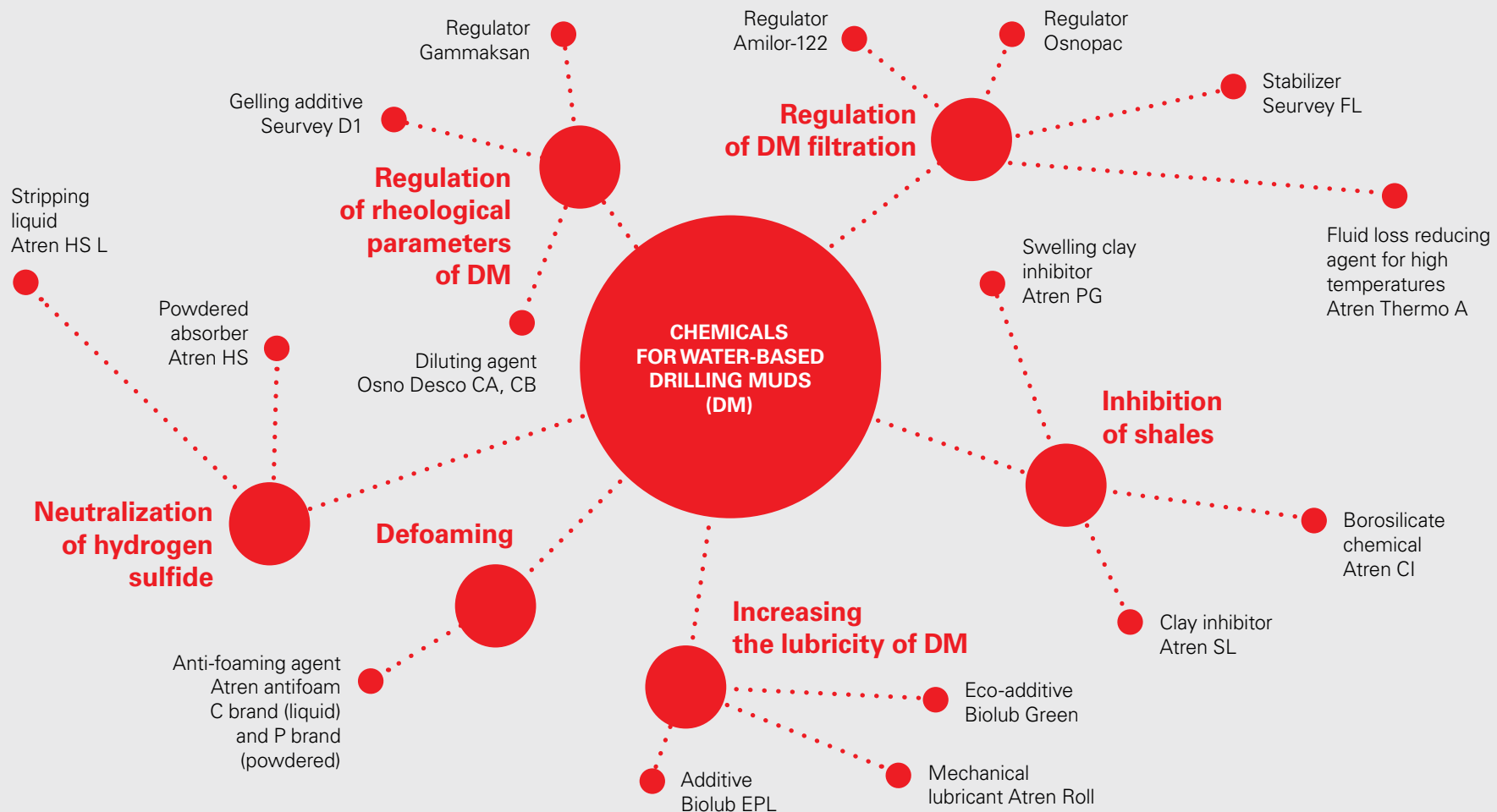
Compliance of the entire portfolio  
of chemical solutions  
of CDP BU with the quality system  
standards ISO 9001:2015

- Chemical and technological solutions for drilling, cementing and oil production

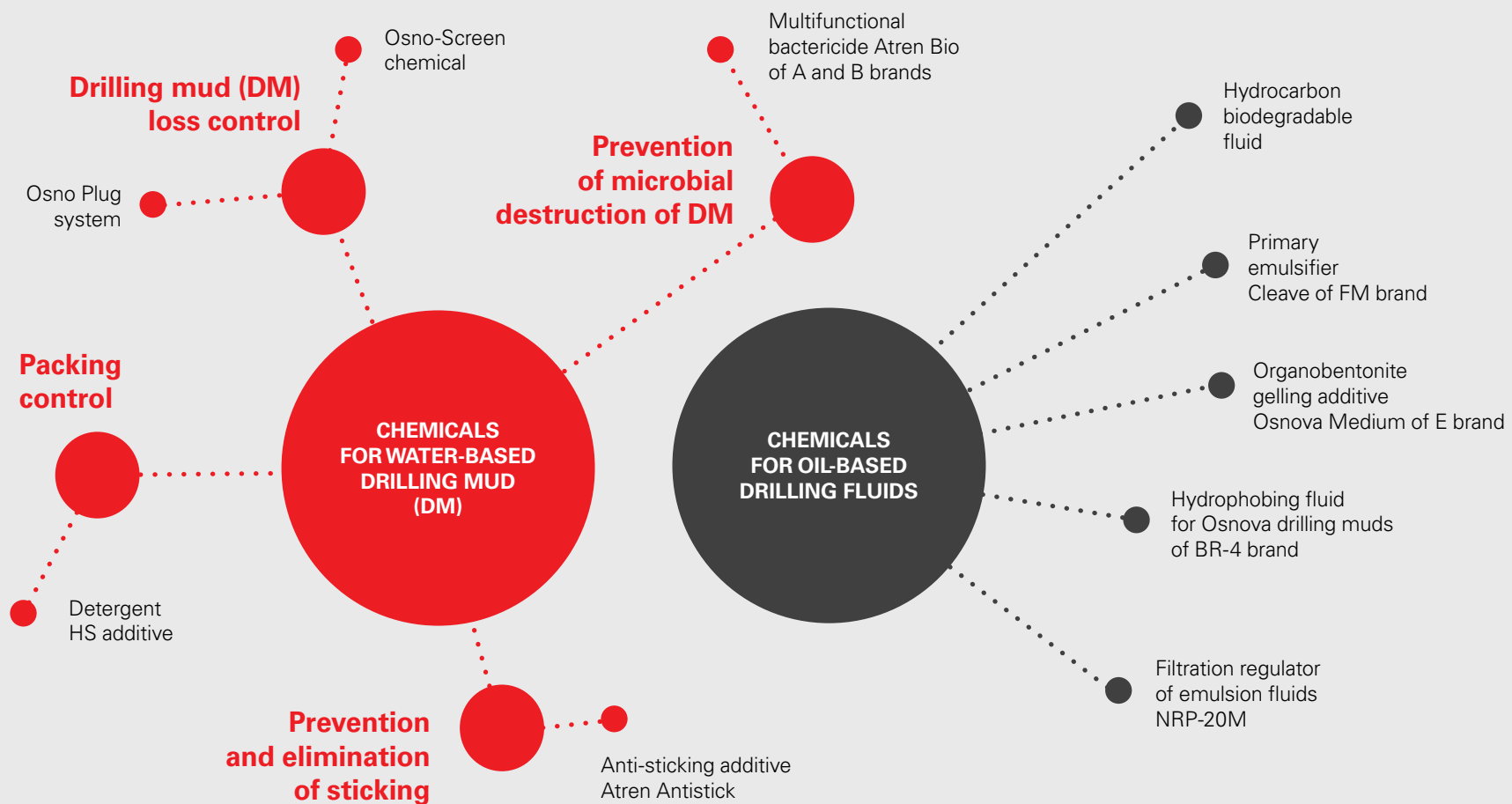
## Geographic reach of CDP BU



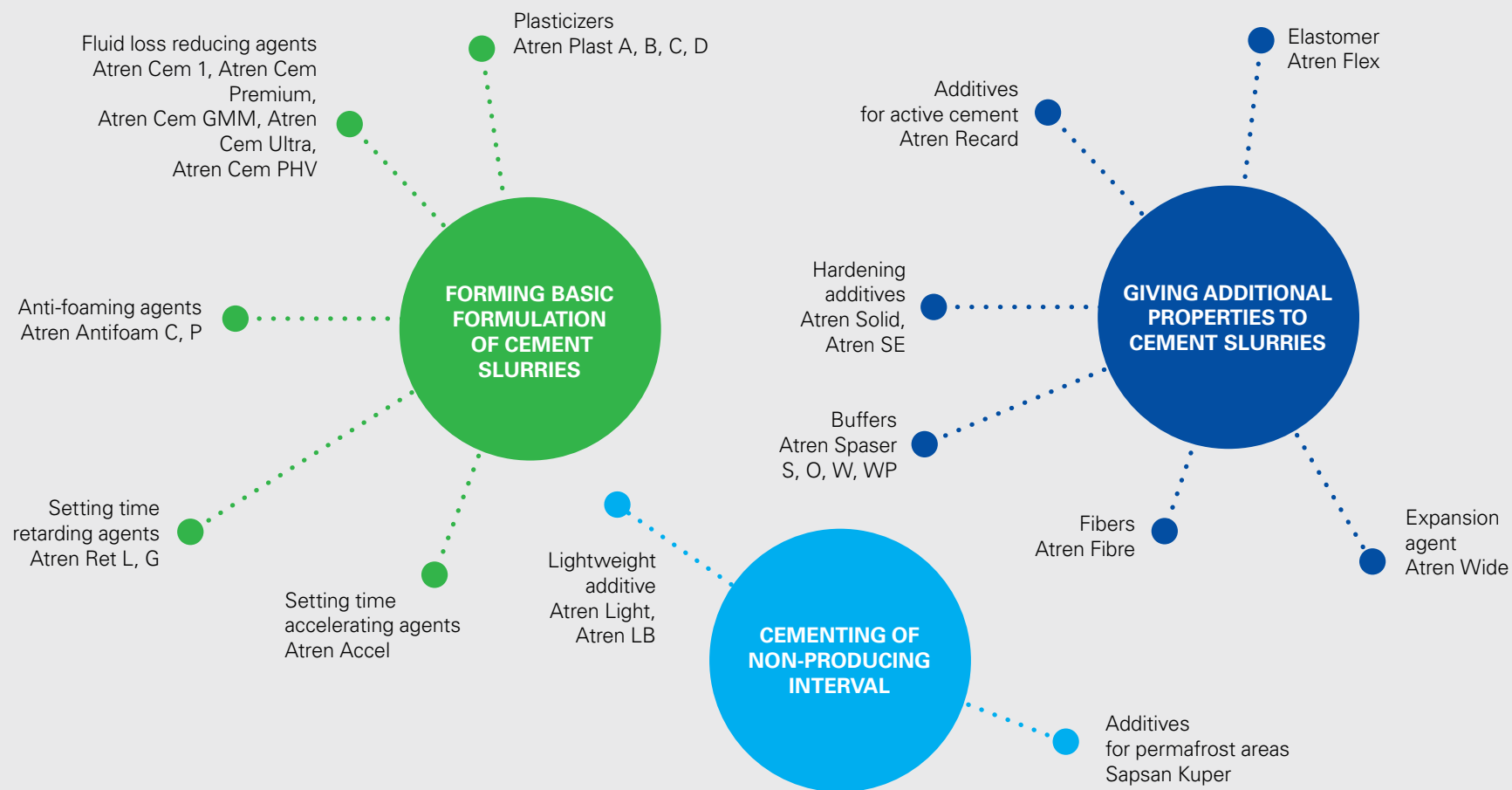
## Drilling fluids



## Chemicals for drilling

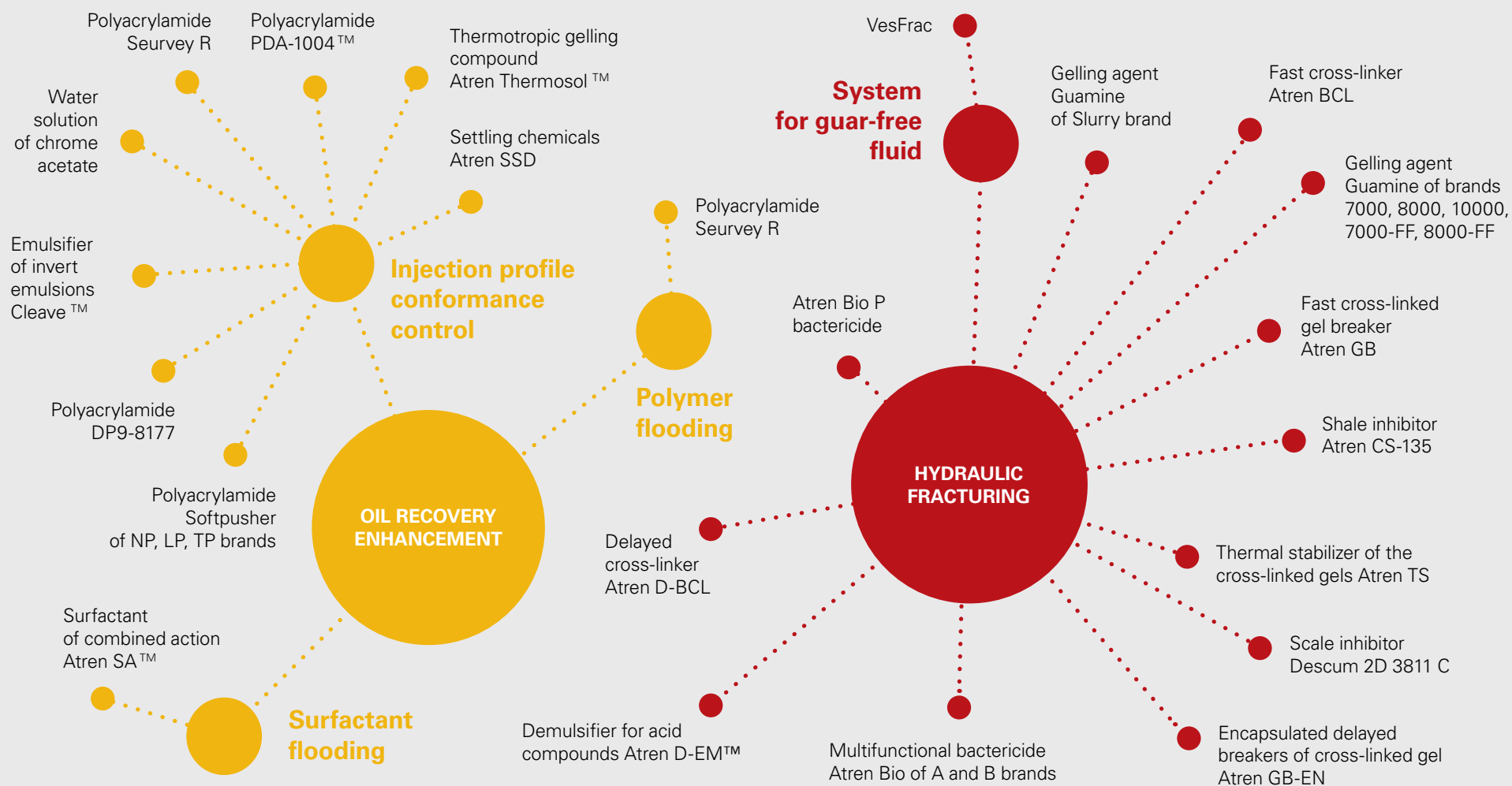


## Cementing additives

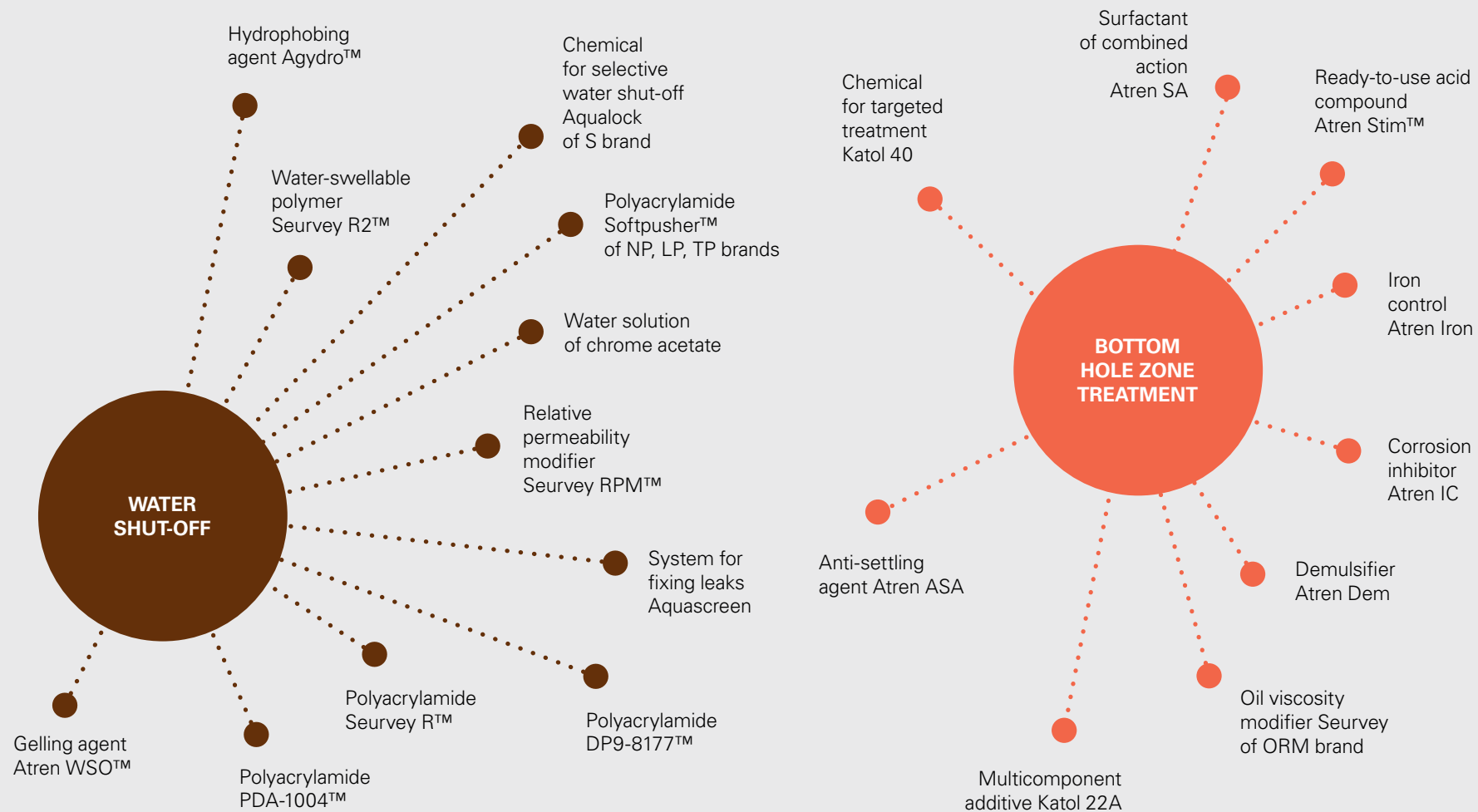




## Production chemicals



## Production chemicals



## Drilling fluids. Practical application

Customer company situation	Mirrico Group solution	Positive effect achieved
Tightening/seating and sticking during casing running	Atren Roll	Trouble-free and quick casing running
Sticking of drilled out cuttings on the BHA and drilling tool	Detergent HS	Drilling string without balling and packing
Swelling of active clays	Atren SL, Atren PG, Atren US	Long-term stability of wellbore walls
Loss of circulation	Osno Plug, Osno-Screen	Reduced time and cost of lost circulation control
Caving and bridgeover of borehole walls	Osnopac, Seurvey FL	Achieving low filtering properties, zero unscheduled washings and reaming
Microbial destruction of drilling mud	Atren Bio of A and B brands	Prevention of drilling mud biodestruction, maintenance of stability of mud parameters
Situations of sticking risk when drilling wells with a complex profile, high coefficient of friction	Biolub Green	Reduction of coefficient of friction, free move of the drill string
High density of drilling mud	Gammaksan, Seurvey D1	High thixotropy, sedimentation stability, stable rheology
Poor porosity of producing interval	Oil-based muds (OBM)	Prevention of clogging of the producing horizon, preservation of the primary reservoir properties

## Cementing additives. Practical application

Customer company situation	Mirrico Group solution	Positive effect achieved
Cementing quality problems in the producing interval	Atren Recard, Atren Solid, Atren SE, Atren Spaser, Atren Wide	Growth of average quality of the producing interval cementing to the level of more than 90%
Cementing quality problems in the non-producing interval	Atren Light, Atren Solid, Atren Spaser	Growth of quality of the non-producing interval cementing to the level of more than 80%
Emergence of behind-the-casing flows during well operation in permafrost conditions	Atren Flex, Atren Recad, Atren SE, Atren Fibre, Atren Wide	Prevention of behind-the-casing flows
Emergence of behind-the-casing flows during well operation in permafrost conditions	Sapsan Kuper	Achievement of average quality of cementing in permafrost areas of more than 80% according to CBL
Emergence of behind-the-casing flows in long lateral holes during multi-stage hydraulic fracturing	Atren Flex	Prevention of behind-the-casing flows after multi-stage hydraulic fracturing

## Production chemicals. Practical application

Customer company situation	Mirrico Group solution		Positive effect achieved
Increased water cut	Limitation of water cut in producing intervals	Remedial cementing with chemicals Aqualock, Atren WSO	Isolation of flooded intervals, reduction of water cut
	Squeeze cementing job in the wellbore	System for fixing leaks in production casing and behind-the-casing flows Aquascreen	Restoration of the well sealing
Снижение нефтеотдачи пластов	Injection profile log conformance, polymer flooding	Polyacrylamides Seurvey-R, Softpusher, Polydia PDA-1004, chromium acetate crosslinker	Increase of oil-sweeping properties of the pipeline system, additional oil production on the site
	Surfactant flooding	Surfactant Atren SA	Increase of oil-sweeping properties of the reservoir flooding system
Снижение дебита скважины	Self-diverting acid compound Katol-40, acid package Atren Iron, Atren IC, Atren Dem, complex surfactant Katol 22A		Increase in average daily output of producing wells
Добыча трудноизвлекаемых запасов нефти (ТРИЗ)	Oil viscosity modifier Seurvey ORM		
Долгий вывод скважины на режим после глушения	Blocking packs Gammaksan, Guamine 7000, Atren BCL, chromium acetate		Reduced time to bring the well to operation

- Chemical and technological solutions for drilling, cementing and oil production

## Business Domains of Mirrico Group



## INDUSTRIES AND FIELDS OF USE

